

THE
PHRENOLOGICAL
MAGAZINE





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THE
Phrenological Magazine:

A JOURNAL OF
EDUCATION AND MENTAL SCIENCE.

EDITED BY
ALFRED T. STORY,

AUTHOR OF
"A MANUAL OF PHRENOLOGY," "WOMAN IN THE TALMUD," ETC.

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THE
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JANUARY, 1882.

THE RIGHT HON. J. CHAMBERLAIN, M.P.



AVAILABLE power finds the quickest sale in the market. In olden times the strong draft horse was the most valuable. At the present day the fastest horse brings the greatest price. "Slow and sure" used to be the saying, while dispatch is the present order of the day. Many men have great gifts, but they are not available on the spur of the moment. They are only adapted to wholesale business, or cases where ample time is allowed. Experience teaches business men that a nimble sixpence is worth as much in business as a slow shilling. The little wheel in the carriage gets to its journey's end as soon as the larger wheel, because the little wheel goes round faster than the larger one. Some doctors require two or more days to decide upon the case of a patient before he applies a remedy; in New Orleans a man would be dead and buried before that time. In this fast age quick sight and a prompt mind are very necessary, for the slow are left behind and are of use only as balance of power, but not for active work. Long-winded speeches are getting out of date; short ones, and to the point, are more in accordance with the spirit of the age.

Mr. Chamberlain is the man for the day and the occasion. He is alive to the interests of the hour; his gun is always loaded and ready for game; he is one among thousands for the availability of his power. His skin is thin, and his nerves lie near the surface, and are easily acted upon; his entire make-up of body and brain indicate prompt, clear, distinct thought and action. There are no hidden mysteries or secret wire-pullings in his nature. His predominating temperaments are mental and motive, with enough of the vital for vivacity and action.

Such an organisation means prompt work and ready response, with a clear and distinct action. He is seldom, if ever, in a muddle on any subject ; as far as he can see he sees clearly, and can make himself distinctly understood, for there is no ambiguity in his nature. All the arts and tricks he may now manifest are the result of political training. His head is too high and too narrow to allow him to be underhanded in his movements. As a speaker it would be difficult for him to be governed by policy, or to hide his real opinions. The base of his brain is large enough, in combination with his temperament, to give ample force and industry. With a thorough business training he could be economical in the use of property ; but he has, by organisation, a better faculty to make than to hoard money. Such a man generally has what he wants and enjoys as he goes along. Cautiousness is barely large enough to give prudence in speech and action, but not large enough to give undue restraint. In the majority of cases he has more propelling power than restraint, and in times of excitement he is guided by his wide-awake intellect and sagacity rather than by fear.

The head is high in the crown. Ambition is a strong feature of his character, and by it he is powerfully stimulated, and tries to do his best to please, make friends, and rise in society. Firmness is large and prompt in action. He is not long in making up his mind, but adheres tenaciously to his decisions when made. Height of head indicates an elevated tone of mind and sources of enjoyment superior to the animal and inferior nature. Such brains recognise a higher law and responsibility than common. The height of the front portion of the top brain indicates strong sympathies and deep interest in whatever will benefit mankind, rendering him liberal in his theology, and tolerant in his feelings towards others.

The forehead is high and prominent in development. He has large perceptive faculties, which make him alive to what is going on around him, and enable him to quickly gather knowledge from the outside world, and be a good judge of men and things, of the value and use of property, of the general state of society, and of the wants and doings of the day. His large Order and Calculation enable him to do what he has to do on strict and methodical principles, to be a good financier, and systematic in his general mode of transacting business. His large Language, as indicated by the prominent, sharp-looking eye, and the full centre of his forehead, gives him rare abilities for a scholar and speaker. His memory of time and place, and of ideas by association, appears to be very good. He is not an abstract thinker, dealing in far-

fetches theories, but a practical common sense man, governed by facts and experience.

His intuitive powers are great ; his mind comes to a focus at once ; he acts upon the spur of the moment ; discerns the signs of the times, and is alive to the passing hour, and knows how to act as the occasion requires. Altogether it is a desirable organisation. For prompt action, for clearness of conception, for distinctness of character, frankness, and openness of disposition ; for high, noble ambition, and a lofty moral tone of mind ; for strong social and domestic affections, warm, generous, and spontaneous sympathies ; for prompt decision,



(From a Photograph by R. W. Thrupp, 66, New Street, Birmingham.)

and tenacity of will ; for clearness and versatility of intellect ; for taste and scope of mind ; for superior business capacity, intuitive perceptions of character and of natural truths ; and for his rare literary and scientific abilities, as also for his talents as an orator,—few at the present day excel him.

The Right Hon. Joseph Chamberlain, M.P., eldest son of the late Mr. Joseph Chamberlain, a member of one of the City companies, was born in London in 1836. He was educated at Uni-

versity College School, and afterwards became a member of a firm of wood-screw makers at Birmingham (Nettlefold and Chamberlain), which his father had joined in 1854. He retired from business in 1874, shortly after the decease of his father. Mr. Chamberlain had at this time obtained a certain local celebrity in consequence of his advanced Radical opinions and the fluency of speech with which he expressed them in one of the Birmingham debating societies. In 1868 he was appointed chairman of the first Executive Committee of the Education League, and in November of the same year a member of the Birmingham Town Council. In 1873 he became chairman of the Birmingham School Board, of which he was first elected a member in 1870. Mr. Chamberlain is also an alderman of Birmingham, and was three times successively elected mayor of the borough (1874-75-76). His name was first brought before the general public in February, 1874, when he came forward at the general election to oppose Mr. Roebuck at Sheffield. He was not successful, the numbers polled being 14,193 for Roebuck, 12,858 for Mundella, and 11,053 for Chamberlain. In June, 1876, he was returned for Birmingham, to fill up the vacancy occasioned by Mr. Dixon's retirement from parliamentary life. In the House of Commons Mr. Chamberlain has chiefly attracted notice by his advocacy of the Gothenburg system of licensing places where intoxicating liquors are sold. He is in favour of disestablishment and of compulsory secular education. Mr. Chamberlain has contributed several articles to the *Fortnightly Review*, viz., "The Liberal Party, and its Leaders" (September, 1873); "The Next Page in the Liberal Programme" (October, 1874); and "The Right Method with the Publicans" (May, 1876). He is president of the Birmingham School of Design. When, in consequence of the Liberal majority returned to Parliament at the general election in 1880, Mr. Gladstone was called upon to form a Government, it was found impossible to ignore Mr. Chamberlain's claims to a seat in the Cabinet, as one of the foremost representatives of the advanced Liberal or Radical section of the party in power. His appointment to the presidency of the Board of Trade gave general satisfaction to that section. It should be added that Mr. Chamberlain has shown himself to be possessed of unusual organising powers, and it is to him that is chiefly due the scheme of Liberal organisation, known as the "Caucus" system, which had so much to do with the Liberal successes at the late general election.

L. N. F.

GEORGE ELIOT.

WHAT HER FACE INDICATES.

The portrait of George Eliot given in the November number of the *Century Magazine*, is undoubtedly the best that has yet been published of her, although those who knew this famous novelist, and are thus able to judge, confess to some disappointment in it. Granting, however, that it is approximately correct, it gives the expert in face-lore an insight into the working of her mind. There is one criticism, however, which one feels disposed to make about the likeness, and that is that sufficient breadth has not been given to the eyebrows; or, in other words, a disciple of Gall would look for a greater prominence of the superciliary ridge at the part allocated to the organ of Order. This organ, speaking phrenologically, is not represented small; but it is smaller by a degree than the other perceptive organs; it is, moreover, out of harmony with the mouth, which indicates great precision.

The eye, too, appears to be lacking in fulness of expression. George Eliot's eye may not have been larger, but her known character would lead one to expect a little more of the *spirituel* in it: not, be it said, because she was so far removed from the human, animal plane, but because of the dominating *morale* of her nature. The eye, it is true, looks smaller, because it is somewhat veiled by the upper lids, giving an expression of penitence almost amounting to penance. In this respect the eye is curiously in contradiction to the mouth. The "starved" look of the one is not borne out by the other. The lips are voluptuous, quick to pleasure, and brimming with love.

There is something almost masculine in her affections, as also in her will; and yet the will is a matter of conscience more than of resolute purpose. In other words, when the intellect had given its sanction to a course of action, it was backed up by the whole of her moral consciousness. In some, will takes the form of an obstinacy that has nothing to do with morals or intellect. Not so with George Eliot.

Let anyone who is sceptical about phrenology note her head at the point where the busts locate the organ of Conscientiousness, and compare it with other heads; it is not often you find such a sign of conscience. I do not know how it was in her character, but according to her head George Eliot had more conscience than benevolence; not that she was lacking in the latter, but that, unlike the generality of people, she acted more uniformly in accordance with her sense of right

and justice than spasmodically according to the dictates of sympathy.

And yet, on the whole, she was a very sympathetic woman : especially was her sympathy with the young and tender quick and spontaneous ; for, in spite of her masculinity, the maternal instinct was strong and prevailing. If anything would have led her to be a philanthropist, it would have been her love for the young.

And here I would hazard a conjecture : according to the indications of the face George Eliot should have been possessed of an almost inordinate development of the organ of Philoprogenitiveness, which faculty gave a bias to her character. She possibly was not one to give much time to the personal care of children, she was almost too active and energetic for that ; but she would be very watchful and thoughtful of the welfare of any that might be under her charge ; and she could not help being mindful of the condition of the young generally. The young of animals, too,—the birds that “sing a joyous song,”

while the young lambs bound

As to the tabor's sound,

—these found a well-spring of sympathy in her nature. Indeed, it was here, if anywhere, that the real poetry of her nature came in. What she lacked to make the true poet was rhythm and melody. Thought, she had, and imagination, although not of the greatly creative type, sense of beauty, too ; but she did not possess that musical faculty that crystallises them together in the magic of harmonious verse.

Was she deficient in the musical faculty? Probably ; although she may have been, doubtless was, very sensitive to sound ; an imaginative mind nearly always is ; but it is a sensitiveness to, and a pleasure in, sounds that accord with the passing mood. But although there was nothing of the songstress in George Eliot, what a tragedienne she would have made ! With all the humour that she possessed, her genius was at bottom tragic. She was quick to see the contrasts of life—the difference between aspiration and realisation—happy promise and tragic fate. Her humour seems to have come from the same source ; for the forehead does not indicate any great development of wit—the phrenologist's organ of Mirthfulness. Is there a mistake in the portrait in this respect also ? Was there in reality a fuller development of the upper part of the forehead laterally ? The mouth would indicate that there was.

The mouth would appear to be the most truthfully limned feature of the face. Almost the whole story is there. Passion,

impulse, jealousy ; contempt, too, although not too much of it ; the home affections, friendship, hospitality ; ardour of the intensest kind, and yet so much restraint and even repose ! It shows the mind that could brim over with confidences, but yet could be so reserved ; a nature that was full of activity and energy, although one that could work them off in mental channels. Pride, too, and love of distinction are denoted, but very little vanity. As to failings—*de mortuis nil nisi bonum*. There may have been anger, fierce indignation at wrong, some wilfulness, and perhaps a little sensoriousness, maybe a tinge of superstition (for the leaning to the hidden side was strong) ; but these are only as the chance discords that (if not too many) add charm to the music of life.

ALGOL.

LECTURES ON PHRENOLOGY.

BY DR. SPURZHEIM.

LECTURE IX.

I beg leave to call your attention to certain distinctions which have been made between the moral and religious feelings. I know that the same thing in its application can be called moral and religious. I have spoken of several powers which, in their application, are moral. And first of Benevolence. We have seen that the cerebral part situated anteriorly in the upper region is destined to what is commonly called goodness of heart, or benevolence ; we have also seen, that the organization situated in the middle part of the head, at the fontanelle of children, is destined, according to our observations, to Veneration, which being applied to superior beings is called “adoration,” and when applied to beings around us, is called “respect.” I have spoken of an organization destined to what is called Firmness in phrenology, often in common language the will ; we have seen that individuals who have this cerebral part large insist much upon their ideas ; they say, “I will do so,” not “I desire to do so.” I have also spoken of a power under the name of Conscientiousness ; we admit that there is, in every man’s mind, a primitive feeling which disposes him to look for justice, and we have then distinguished between the power and its application. All these feelings, in their application, are moral ; and I come now to a still more difficult part ; I confess it freely ; it is to speak of certain feelings situated in the anterior part of the head. Phrenology embraces the whole of the human mind ; we have considered man as an animal and as a moral being, and we have now to consider him as a religious being.

HOPE.

I shall speak of a particular feeling under the name of Hope. Is there anything in man which may be styled hope? It is a feeling necessary in every situation. What would a man do without hope? Are we not sometimes infinitely more happy whilst hoping for a thing than after its enjoyment? Is it not necessary to possess this feeling? Philosophers and others have spoken of many impulses to action, as desires, but there is something in man not to be confounded with desire. Each power in itself desires, but we have not hope in proportion to what we desire. There are some who have this feeling in the highest degree, sometimes even to such an extent as to become deranged. Others who have not quite so much of it, but are nevertheless continually scheming—building castles in the air; they form plans and immediately think they must be realised; they think and immediately begin to act, without reasoning—without caution; this is the abuse of the application of this fundamental power. There are others who so easily despair that they never hope; if they undertake a thing they scarcely ever hope to succeed.

You may discover the organization in a most positive way; look at both sides of Veneration and you will easily perceive a great difference in the development of individuals.* You will see that this cerebral part is variously developed in different individuals, very large in some, very small in others. Some have the middle part very much developed and the lateral parts depressed; and the lateral parts will be strongly developed in others. (Several casts were shown, in which great differences of these organizations were evident.) You see here a great development of Cautiousness, but not much of Hope; looking at such an individual I should say, that he fears more than he hopes. Some individuals are very fearful, scarcely ever hope to succeed. There are some persons who make various projects, various plans, and then give them up; they do not consider them beforehand, and in such persons

* The location of the organ is immediately in front of Conscientiousness, and laterally of the back part of Veneration. In many persons a distinct depression will be found there, in others a distinct swelling, and the character of the individual will be in accordance therewith. The writer is well acquainted with a man who has a large development of this organ, and who, stimulated by excessive hope, has for years past been devoted to speculations of the riskiest and most forlorn kind. But, though disappointment has followed disappointment, and failure and ruin, such as would have driven hundreds of men crazy, have long been table and bedfellows, yet he never doubts, never despairs, never relinquishes one jot of anticipation. He is going to succeed, going to win his thousands and be happy. Meanwhile he eats the bread of sorrow almost cheerfully.

you may always expect to find a large development of Hope; there are others again who undertake very little. If I see an individual with a large development of Hope, and if I see also Acquisitiveness large, I know he will undertake things from selfishness, and so of the other powers, being combined, we may trace somewhat of the application of primitive feeling, but this is not our object now.

This feeling, in common life, is very important; it is essentially the parent of the religious sentiments; it is this power which disposes man to hope for future life, that gives him a "longing after immortality;" we are so often deceived in this life that we hope for something better in another. There is a natural feeling in man to hope for things; and Christ himself taught man to hope for something better in a future state. In conversing with persons of religious habits, you will find some who hope much, others fear very much, and you will be sure to find this cerebral part large in the former persons. I give this organ as quite certain, and the power is that which gives a disposition to hope. Look at such a head: do you suppose that the person would be influenced much by the hope of future rewards, or the dread of future punishments? This was a criminal who did not betray the least fear even at death. Compare it with others; can you not distinguish a great difference between them? (Several specimens were shown of different degrees of development of the organ of Hope.)

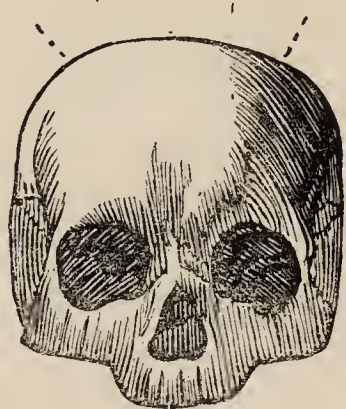
MARVELLOUSNESS.*

I come now to the most difficult, I confess, of all the organs, and it is one extremely active in mankind. Men have been conducted by their feelings in all times, and still are in a very great degree. There is something peculiar in the human mind; if we consult the history of ancient times, we find that man has always been pleased with the ideas which have reference to superior beings; if man is to have commandments, he wishes to receive them from above, and he is very attentive to such as he supposes come from above. The Greeks had their oracle, to the instructions of which they paid the greatest attention; the Romans looked out for supernatural events and miracles, and they had their oracles, to which they attached much importance; if a crow flew to the right or to the left it was regarded favourably or unfavourably for the intended enterprize; if the intestines of an animal offered for sacrifice had certain appearances, they were encouraged to undertake,

* The American phrenologists have given to this organ the name of "Spirituality," and it has been generally adopted in England, whether wisely or not is perhaps doubtful.

or to abstain from doing, a thing intended. Indeed there would be no end if I were to mention every proof of the tendency of the human mind towards what is miraculous and supernatural. I find that it is a feeling still very prevalent in persons of all degrees of civilization. The savages are powerfully influenced by their sorceries and witchcrafts, and so on; and if we observe even civilized nations, we shall find abundant proofs of the existence of the same feeling. I have only to contend for the existence of the primitive feeling, not of its particular application. I shall not say whether the Greeks and Romans were wrong or right,—that does not devolve on me to prove; I only assert that we find them disposed to entertain such feelings.

We come to more civilized beings—to reasonable beings. A man, by an excess of Veneration, will become superstitious, and some will say that they believe in witches; this is the love

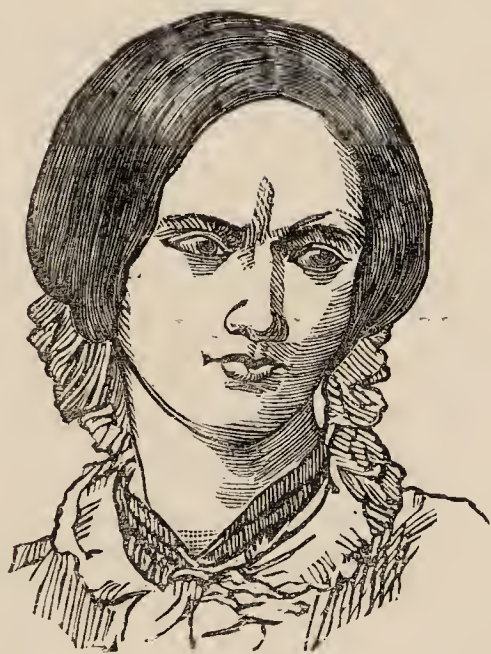


Marvellousness large.—Greek Skull.

of the marvellous, you see. A man has a fundamental feeling, by which he wishes to be in communication with something superior; and we must take great care not to be led into abuses by this feeling. I am sometimes astonished to see it so strong in individuals; if you reason with them on their religious opinions, they will say, "Ah!" there is no reason to be admitted here, this is a mystery; and the more mysterious the better are they pleased. Others will say, that they will not believe the religion of other nations, of other individuals. There is the greatest tendency to believe in miraculous and mysterious things, and we see that reasonable persons, even persons who reflect, have the greatest difficulty to overcome certain feelings. Look at such a man as Samuel Johnson; it is known the great difficulty he had to overcome certain opinions which he had formed. If you observe the common people, you will observe this feeling very active in all countries; they do not like to change their places of residence, or

to be married on a Friday ; if the salt is turned over, some mischief is to happen ; and then there are winding-sheets on the candle, and various prejudices. If any person would tell a mysterious story to any of us we should feel amused by it ; we are all fond of fictitious stories. Tell people astonishing stories and they will be pleased. In theatrical representations, introduce a multitude of transfigurations, incantations, enchantments, and so on, people will be amused, not only children but men. So that you see there is a feeling which disposes mankind to be amused by such things.

In religion, even of a refined order, you will see this feeling active. We find that some individuals place the greatest confidence in their faith, however mysterious, and there are others who would begin by reasoning, and you will find the greatest difference in their organizations ; for he who wishes to



Marvellousness large.—CHARLOTTE BRONTË.

receive his religion by reasoning has not much faith. I have repeated this assertion, and it is an important one in the consideration of the philosophy of the mind, that all the feelings are felt. Every one from infancy is attached to things which savour of the wonderful, and such as appear supernatural, but different in their degree ; and I repeat that I do not speak of their application, but of the fundamental feeling, and that those who have the feeling strong have a peculiar organization.

This feeling is like all others, blind in itself, and if you allow it to act alone, it will produce disorders, as well as the other feelings. Recollect, however, that I do not speak against its useful application, but merely assert that disorders result from it when in excess. In phrenology we admit that the powers are given for certain purposes, but not to be abused ;

we speak of hunger and thirst as natural to man, but we do not say he is to be a gourmand ; we speak of the love of children and of the desire to acquire, but not so as to be unjust to each other ; let us be attached to each other, but let us not blunder about it. If I speak of the love of self-esteem, or of the power of destructiveness, I do not say man is to destroy himself or to be proud. I think that man is endowed by the Creator with power to destroy animals for his sustenance, but not with authority to torment and injure them ; no, Benevolence, which is also given to him, counteracts that. Benevolence may produce disorders, but we must not encourage idleness to be benevolent. So of Hope, we may hope for things that are reasonable, but not such as are impossible. Let us admit hope, that hope which leads us to the belief of communication with superior beings, and which induces us to believe that we shall live hereafter with superior beings. There is a point of harmony to be arrived at, and we must try to bring the whole into harmony, and not let one power run alone ; for if we let any one power go alone, and not in combination with other powers, the result will be bad.

I spoke of a feeling of this kind, and formerly I called it "Supernaturality;" I have called it so in my French work on phrenology. I spoke of some singular observations made on the heads of persons who were visionists, who thought they had seen ghosts ; and it is said of Socrates even that he had seen the demon. Some people have said that they can raise the devil, and many persons have given figures to him. Many people, reasonable enough on all other subjects, believe in visions, they believe in them, and think they see them. I will show you the head of a man of your own country (William Blake), who wrote a book on visions ; and if you look at his head, a little anterior to Hope, you will see that it is very full there. Many other individuals have come under our observation, but I merely give these as examples, because nothing can be done in phrenology without observation ; we may observe the manifestations of the human mind, and arrange them afterwards, but we could not say there is a fundamental power of believing in the existence of ghosts.

During the past few years I have reflected upon this power, and by degrees I have found that it is the organization which undertakes the support of faiths. Seeing that some individuals had a greater tendency towards the dogmatic part of religion, and that others directed their attention more to the moral actions, I was induced to observe their organization, and I found that such persons were alarmed at hearing of or seeing ghosts. I found that such as believed in ghosts, and have a

tendency to the miraculous or to supernatural events, were large hereabout, and seeing this, I called it "Supernaturality" in my first work, published in 1818, but it is really difficult to find names for the primitive powers.

The object of phrenology is to display the fundamental powers of the mind, to discover the parts of the cerebral organization with which they are connected, and then to find names to express them correctly, and this is often as difficult as the two first. Those who believe in wonders and miracles have this part large. The Edinburgh phrenologists, particularly Mr. Combe, call it Wonder, that is a modification of the expression I have used, but there is no doubt as to the power or the organization: as to the name I will not dispute for that; we have no authority for names, and I am ready at any time to change the name of a power if a better can be substituted. I should not, perhaps, be able to speak so certainly of this particular feeling, if it were not the cause sometimes of mental derangement. It is for me to call your attention to this feeling, and I leave it to you to say, whether you can find an appellation preferable to the one I have affixed to it.

This feeling ought to be brought into combination with all the rest; I like to bring them in harmony, to bring them together. This feeling is sometimes excessively active in insane persons, and whenever I see such particular manifestations, I am sure that there is something primitive in the feeling, and I look then for the organization. The powers are given to produce certain satisfactions; but it is not every one that is quite satisfied with this life, and therefore looks for future satisfaction, and he does this by hope. Certainly any one, without having religious faith, will sometimes be astonished, and it is not necessary to go far for him to feel astonishment, for if he will reason with himself as to the means of his existence, how he is nourished, how his body is built up, he must say that it is incomprehensible; we must refer it to some more ultimate cause, and it is said we shall know the master by his works.

I wish a term for the power itself, not for its application; and therefore, perhaps, the name of "Supernaturality" is not exactly correct. I look in Johnson's dictionary to find the meaning of "wonder," and "supernaturality," and "marvellousness." I find that "wonder" is defined to be merely an expression of surprise at any natural event; but this feeling I am speaking of is not confined to natural events, but has a still greater tendency to supernatural events, hence we seek for a name which embraces both, and looking at "marvellousness," I find that it has in this language a twofold meaning, that it expresses both, and if I were to choose the term for this

power, I should prefer "Marvellousness," according to Johnson's definition.

But you must not suppose that because we differ in names we differ in the science. I must confess that the Edinburgh phrenologists have done great good to phrenology by taking it up in the spirited manner they did; it was laughed at by every one, because it was much easier to laugh at than disprove it, and I acknowledge my thanks to the phrenologists of Edinburgh, and I am sure that if it had not been for their exertions, for those of Mr. Dunkin and Dr. Elliotson in London, and the large collection of casts made by Mr. Deville, phrenology would not be known half so much as it is in Great Britain. If we differ from each other in opinion, we must go to nature and see what she will show us; whether Dr. Gall, or Mr. Combe, or myself, may differ in our opinions, we cannot decide but by an appeal to nature, and we must be content to be instructed by her.

This is a great advantage which phrenology has over all other species of philosophy; we go to nature, not to the study, to decide our differences. There will be differences among phrenologists as to the application of the fundamental powers, but to ascertain what mental operation must be ascribed to each power, is the great object. Is there a fundamental power to regard with surprise and astonishment natural events? Then let it be named accordingly; but if there be a power to regard also supernatural events, then the sphere of its activity is enlarged, and I think that the name attached to it should express this. We cannot say that we have the real picture of the Saviour, but the ancient artists have given such a shape to the organization as represents him disposed to believe. This (a mask of Jupiter) is certainly an extravagant representation; it is larger than natural. They have given to Jupiter a much larger forehead than is natural. Let us look, however, to smaller proportions in men, and be contented with less development.

Whenever this feeling is strong, you will find great breadth hereabout, upon the upper and lateral part of the head, and it is, generally speaking, much more developed in this country than in France, a little anterior to Veneration, by the side of Benevolence. Shakspeare, in his conceptions, indulged in this train of ideas, and you know that he has succeeded in making great impressions on the minds of others. It is found large in the head of Johnson also, and in the representations which have been made of angels. It is very singular, that among all antiques, the artists have given to none of these great men such a fulness as to Socrates. It is certain that they paid great

attention to formation, and we see, among the Grecian sculptors, that they paid great attention to the form, and selected that which they considered the best. We all know that a Grecian nose is considered most beautiful, but it is not every Greek who has a Grecian nose.

To return, however, to the subject, we find that some men, as religious martyrs, have died for their faith, and we find such persons very broad in this part of the head. If you examine the upper region of the head, begin in the middle line, and then examine the parts laterally. I would say of such an individual (having Veneration and Marvellousness flat) that you must not begin with the religious feelings in him. It appears then that man is by nature invited to, and has received a cerebral part to manifest marvellousness.

IDEALITY.

I go now to the consideration of a power which gives poetical talent. Poetry does exist, and it is admitted that educa-



Ideality large.—WHITTIER, the American poet.

tion cannot give this peculiar talent. We never say that children acquire the talent to become great poets. "A poet is born a poet," that is an ancient maxim. Look at the organization given by the artists to the poets of ancient times, and you will see that they are broad here laterally. Horace, you see (showing a bust), is represented with this part very prominent. Take your own poets, compare the breadth of their heads hereabout; look at Milton, and compare Milton with Locke, and you will observe great breadth in the head of Milton in this part, and narrowness in Locke. Many others I could show you; here is the cast I had taken from the head of a shoemaker at Paris, François is his name; he is quite a natural poet, he makes shoes and makes poetry by turns. Here again is the bust of Homer, but it is said we have not

the true bust of Homer ; whether we have or not it is singular the artists should have given to him from guess that organization which corresponds with his character before phrenology was known as a science. Look at those of the modern poets who excel in the true poetic genius and you will find them broad here.

Still, not all men who are broad here are poets. If poetry is one talent, can you ascribe its modification to one power ? No more than you can the religious manifestations to one feeling, or the moral feelings to one power. A great number of conceptions are necessary to constitute a poet, and these cannot depend on any one power. Poetry is the result of a great combination of powers, and there is something very peculiar in it. One man tries to write verse and it is prose ; another man writes prose, and you will find that it is quite poetical. I say that there is a feeling essential to constitute a poet, but yet this feeling may exist without the individual's being a poet. It is necessary, to write poetry, that there should be a certain warmth of feeling, an exaltation of the mind, not merely to describe things as they are, but to give the description a tinge beyond what is real, there must be a little fiction.

Some men in looking at things as they are, become unhappy, because they do not find them as they should be. The feeling of "Ideality" is the one I speak of, whether the conception be moral or religious ; in all good poetry you will find this prevailing ; but as to rhyming, that does not depend upon this power. Let me see a man wild in his conceptions in his poetry, or if he be an artist, in his designs, and I shall expect to find this part broad. It is a feeling, too, which disposes men to become unhappy, since it induces them to look at things as they ought to be, rather than for things as they are. It is a power which gives a great exaltation to the feelings. Here is the head of a woman who lived in a poorhouse ; this organ is very large, and I am sure, that whatever feelings she might have possessed would have been exalted by this. Those who have a great combination of this power with the other feelings are very sentimental. I give the organ as positive, but do not speak of the application of the power.*

* SUBLIMITY.

Since Spurzheim's time the organ of Sublimity has been added to the list of original faculties of the mind. Its location is between Cautiousness and Ideality, and it may be said to partake of the nature of those two faculties, namely, a blending of the love of beauty with awe. It appears, however, to be a distinct organ, and may be found large in development when the neighbouring organs are small. It was included by Combe and the earlier phrenologists in Ideality, though the former surmised that it was a distinct organ, and from its proximity to

CHARACTER READING.*

Man has always been considered an important study, so much so that the wisest and most learned in all ages have given much thought and energy to the investigation of his mental nature. Man was first studied astrologically. Sages and philosophers at one time believed that the character, happiness, and circumstances of man depended upon, and were influenced by, the particular stars that were in the ascendant at the time of his birth. The most important queries then were—Under what star, planet, or what phase of the moon was he born? This being known, his whole life was mapped out for him. As the facts of the case were, however, more thoroughly investigated, it was found that a man could materially change the destiny marked out for him by the stars—could alter the conditions fixed by them, and in general could counteract their influences by the exercise of judgment and circumspection ; so that astrology ultimately came to be looked upon as insufficient, and people gradually lost their faith in its teachings. Man was then studied physiognomically. His form, the general build of his body, and the peculiarities of his face were observed, because these were supposed to accompany certain marked traits of character ; but as people became more and more acquainted with the manifestations of the human mind they found the face alone, or the general form of the individual, was not sufficient to indicate all the peculiarities of the mind. Man was then studied physiologically ; but ultimately that did not satisfy the inquiring mind. It was found that other aids were necessary to unfold the nature of man fully. It was then observed that there was a striking coincidence between the shape and the contour of the head, and the character of the individual : hence organology, or phrenology, was hailed by many as the key to unlock the mysteries of metaphysical science.

Cautiousness might have to do with the feeling of the sublime. The function of Ideality seems to be simply to give the sentiment of beauty, and in its cultivated state imparts taste and fancy ; whilst to Sublimity belongs the power of developing the imagination in its wilder and grander forms. “It is the sentiment of beauty mingled with awe ; it imparts a sense of the vast, stupendous, and illimitable, and gives to the mind the power of enjoying nature in its rugged and more magnificent forms, even while the chill of fear creeps along the nerves ” (*Manual of Phrenology*). Those of the poets in whom Sublimity preponderates delight to depict gloom and terror ; its influences are markedly manifest in Danté, Milton, Byron, Shelley, and Wordsworth. It is an organ that is large in the Scotch, and generally in people who live in mountainous districts.

* The substance of a lecture delivered by Mr. Fowler, at Warrington, on November 21st, 1881.

The science of phrenology does not profess, however, to read the spiritual nature of man, as was done in olden times. It enables us to understand the general character as indicated by the daily life. It cannot tell whether a man loves God or not ; but it gives a key to the native powers of the mind, that supply a tendency or inclination to manifest the emotions of love and devotion, to exercise the intellect, &c. Phrenology has a scientific foundation, inasmuch as it recognises that the different powers of the mind have different media of manifestation. It asserts that the brain is the organ of the mind, that it is composed of different nerves, corresponding to the different powers of the mind. It argues that if the brain were one whole undivided nerve, the mind would be simply one undivided power manifested through a simple medium ; but that the mind, being divided into many different and distinct powers, the brain is divided into as many distinct and different nerves, centres, or organs. There is a relationship between these nerves and these powers of the mind. Many, however, are not prepared to admit the truth of these propositions for the want of sufficient investigation into their claims for consideration : but a thorough knowledge of the subject will carry conviction to every unprejudiced mind.

The brain is the crowning and most important organ of the body, and with the aid of the nervous system, performs the highest functions. The other organs of the body serve simply as media through which the mind manifests itself. Character is indicated by every organ and function of the body, but more especially by the form of the brain. Man may be considered in the light of a placard, hung up on the wall to be read. Those who understand the letters on the placard can read them easily, and comprehend their meaning ; otherwise they are unintelligible and full of mystery. We must therefore decipher the letters of human nature in order to be able to read the placard of human character. Our virtues, vices, excellences, failings, culture, or barbarism can be seen by those who have eyes sufficiently educated to read and understand their external manifestations. The face expresses the state of the mind at the time of its action. Every element of mind has several distinct modes of manifesting itself, in the speech, emphasis, tone of voice, expression of face, gesture, walk, attitude, and so forth ; and it is very interesting to note the manner in which the different faculties expose themselves, how they throw the body, contort the features, elevate and depress the muscles, &c. When Combativeness and Destructiveness are excited, they give a low, guttural, basilar sound and tone to the voice, sometimes a very severe, harsh, and strong

tone. The organs in the base of the brain contract the muscles of the face, and incline them in a downward direction. If Mirthfulness be excited, the corners of the eyes and mouth are turned upwards: hence the smile; every wrinkle in the face is turned to the organ of Mirthfulness. If Ideality and Sublimity be excited, the gestures are extended from the body, the hands are stretched out as far as possible; while if Secretiveness be in exercise, the arms are contracted and held near the body, the coat is buttoned up, the person looks slyly out of the corners of the eyes, whispers and winks instead of speaking aloud, and the gestures are never bold and free. Cautiousness throws the head on one side; and there is a timidity and irresolution, not only in the walk, but in the voice, gestures, and general movements.

It would be interesting to show the natural language of each organ. When this is understood the character can be easily read by the attentive observer of the ordinary actions of an individual. With regard to the nose, there is the courageous Roman nose; the Grecian classical nose; the African blunt nose; the turned-up nose; the talking, ambitious nose; the pointed, smelling nose; the sharp sarcastic nose, &c. The nose indicates much. The mouth and lips are equally expressive. The chin is a good index of character, and indicates weakness, duration of life, fruitfulness or barrenness, warmth or coldness, ardour or lifelessness, and so forth. The ear indicates, in its various formations and degrees of development, generosity, stinginess, musical talent or the reverse, courage or timidity, &c. But of all the features the eye speaks the most. In colour there is the black, brown, gray, or hazel eye; and in development, the large, fat, full, small, dull, or clear eye; the peculiarity in each indicates something in the character of the individual. There is the deceitful, cunning, cold, speaking, loving, luscious, intellectual, dull, and stupid eye—the happy, hopeful, weeping, crazy, sleepy, sheepish, bold, piercing eye. But no one will pretend to say that the eye is the organ of these different qualities.

All nature is graded. Human nature varies in stock, quality, and perfection of organisation; hence the natural differences are manifested in susceptibility, clearness, intensity, strength, tenacity of life, and power to command, or go through severe trials. The shape of the organisation as a whole, the development of the brain, and the manifestations of the character strictly harmonise one with another. Where there is a certain form of head we may invariably find a certain kind of character. If the head is high and fully developed, it shows that there is a lofty tone of mind; but if the

head is low and broad in the base, then the mind is one that seeks gratification of a sensual character ; so if the head is long, the mind is penetrating and extended in the range of its action. If the forehead is sharp, the mind has a similar characteristic. If the head is narrow and sharp, the mind is narrow, but takes direct views of a subject. A head broad in the temples and frontal region takes comprehensive views of things. Thus, in reading character, we have not to take into account one or two parts of man, but the whole man—head, face, hands, feet, physiology, temperament, and everything else connected with him ; and if we do that, we can read like a book ; for man, like everything else in nature, is built upon principles, not hap-hazard, and hence everything about him has a meaning, and that meaning is decipherable to those who have learned the alphabet of organisation.

HATS AND HEADS.

A correspondence under this head has been published in the pages of *Nature*, in which some recondite questions have been propounded from a hatter's point of view. It seems to have occurred to someone that English heads must have been growing smaller during the last quarter of a century, because hatters have been selling a greater proportion of smaller sized hats. The inference, of course, seems natural enough. But the question, as we shall see, has to be looked at from other points of view besides that of the hatter. But let us first give some of the alleged facts. A *résumé* is given by a correspondent named Tuckett of the facts collected by himself and Dr. Beddoe which, he thinks, justify the conclusion that a diminished size of hat is now required by young men as compared with those used by the same classes twenty or twenty-five years ago. The facts are (1), that a Bristol hatter states that "smaller hats, which used to constitute only a small percentage of his stock, now form the bulk of it ; while those which formerly suited the larger proportion of his customers are now usually required only by the older ones amongst them." The hatter in question "estimates the difference as amounting to at least one whole size, which is equivalent to three-eighths of an inch in circumference." (2) "My friend, Dr. Beddoe, whose attention I called to the subject last year, informed me that Mr. Garlick, hat manufacturer, — Bristol, furnished him with the sizes of 200 hats sold by him in 1862, and the average is precisely 7, one of the lots yielding 7.01,

and the other 6.99. Two lots of 100, each sold by him in 1880, averaged respectively 6.89 and 6.92, or a mean of 6.905. Thus the shrinkage since 1862 appears to be about 0.1 of the technical scale usually employed by the trade, of which 0.125 ($\frac{1}{8}$) represent a difference of *one size*, but a difference in the *circumference of the head* of $\frac{3}{8}$ ths ($= 0.375$) of an inch. Therefore the above 0.1, deduced by Dr. Beddoe from Mr. Garlick's figures, represents a shrinkage in circumference of over $\frac{1}{3}$ of an inch, which agrees pretty closely with my previous result of 'nearly $\frac{1}{2}$ an inch' from Mr. Castle's data." (3) While in Scotland during the summer of 1880, Dr. Beddoe learned from a Glasgow hatter "that his experience fully corroborated what has been stated, so that the diminution appears not to be confined to the southern portion of the kingdom." (4) A London hat manufacturer affirms that "men's heads have decreased in size during the last twenty years." He says: "Twenty years ago the circumference of men's heads ran from $21\frac{1}{4}$ to $23\frac{5}{8}$ inches. At the present time the size is from 21 to $22\frac{3}{4}$ —mostly 21 to $22\frac{3}{8}$. (5) Another hat manufacturer says that "fifteen years ago the usual sizes of hats in England were from $6\frac{3}{4}$ to $7\frac{3}{8}$, and even $7\frac{1}{2}$ was not uncommon. But now, if a $7\frac{3}{8}$ hat were wanted, we should have to make a block purposely."

These are the facts, and now come the explanations. To the somewhat obvious suggestion that the practice of wearing the hair more closely cropped might account for the difference, a practical hatter is of opinion "that the effect of this would be scarcely perceptible," and yet any one who has been in the habit of wearing his hair long and thick, and has then taken to close-cropping, knows how much difference the change makes in the size of hat needed. Another suggestion is that the mode of wearing the hat has changed, and the present style admits of a smaller size. A Bristol hatter writes: "I am well aware that the size has considerably decreased within the last twenty to twenty-five years, but I attribute this entirely to the manner in which they are now worn, which is far more forward on the head than formerly. If I were to wear my hat as my grandfather did I should take one quite a size larger. When I was first at the trade I well remember that all hats had a cloth patch sewn on the under side of the brim, at the back, for the purpose of taking the friction off the coat collar, and thirty-five years ago we never made a hat without one." Mr. Tuckett thinks this explanation plausible; but he prefers, of course, to abide by his first preconception, that heads are actually on the decrease: that is natural, we all do, or at least, most of us. But let us see what another

correspondent, Mr. C. Roberts, of Mayfair, who does not appear to have any preconceptions in the matter, has to say. Mr. Roberts writes : " I believe that hatters' measurements of the head can only be accepted as mere records of the change of fashion, and that they are of little anthropological value. Thirty years ago close cropping of the hair was confined almost entirely to soldiers, grooms, and prisoners, and it was popularly considered a badge of servitude, or worse ; but now, thanks perhaps to the Volunteer movement, and to the discontinuance of hair cutting as a punishment in prisons, the military style of wearing the hair is almost universal among young men ; hence smaller hats are required now than formerly. I find that long and short hair make a difference in the circumference of some heads of nearly half-an-inch. Again, our night-cap wearing fathers and grandfathers were very much concerned about the temperature of their heads and ears, and they were accustomed to press their hats well down to keep them warm. Now they are worn much higher on the head, as a glance into any old print shop window will show. Travelling-caps, and caps worn by boys, were formerly provided with lappets to cover the ears, but these peculiarities have long since disappeared, and caps of an undress military character, or felt hats, stuck on the *top* of the head, have taken their place. Mr. Hyde Clarke, in his letter in your last week's issue, says that he has observed that the ears are lower down now than formerly, and he thinks this a proof of degeneracy of race ; but the ears only appear lower because the hats are higher on the heads, and in any case it could be no proof of degeneracy, because the lower the ear the bigger the brain. But the chief reason for the falling off in the dimensions of hats in the present day is the accession to the hat-wearing community of a very large number of small-headed persons, such as clerks and shopmen, who formerly did not wear hats at all ; and, on the other hand, the defection of a large-headed class, the clergy, who have given up tall hats and taken to the use of soft felt ones. The only way hatters' measurements could be made available for anthropological purposes would be to examine the statistics of one class, say the professional, who have always worn hats, and then allow for the change of fashion in the hair and the position of the hat at the present day."

Professor Flower suggests the same reason for the diminished size of hats. " May it " (the decrease in the size of hat), he says, " not arise from some change in fashion, . . . such as hats being worn more on the top of the head than formerly." Another correspondent writes : " I shall not enter into the

question of the relative sizes of the heads of our generation, and of that of our fathers or grandfathers, beyond stating my general agreement with the explanation suggested by Prof. Flower, viz., that we carry our hats perched on the top of our heads instead of bringing them down as they did over occiput and ears, and that many of us, myself included, wear what hair we have so short that brushes and combs become superfluities."

Some collateral subjects are entered into, among others the fancy that of the ears being set lower than formerly, as alluded to above; but it is not necessary to touch upon them here; nor is it worth while discussing the cause of the decrease in the size of heads until it has been actually proved that there is such a decrease. The probability is that, if the means were at hand for proper comparison, it would be found that instead of there being a decrease in the average size of heads, there is an actual increase, or at least an increase in the average capacity of heads.

DR. RICHARDSON ON GALL.

DR. B. WARD RICHARDSON has won a well-earned reputation for his advanced views and his originality of thought on many subjects connected with his profession. He is evidently one who is open to new ideas, and who, when he has struck a new lode of truth, is not afraid of avowing it. Nor is he slow to give honour to whom honour is due, even though that one should be unpopular with his professional brethren. If there is one who has been ungenerously dealt with by medical men, it is Dr. Gall, to whom is due the honour of having laid the foundation of the Science of Phrenology. He has been condemned as a charlatan and a quack, and much else beside that is disreputable. It is, therefore, doubly to the credit of Dr. Richardson that he has the courage to pay a high tribute to the value of that eminent man's work as an anatomist, physiologist, and psychologist. Dr. Richardson has been delivering a course of lectures on physiological subjects, at Exeter Hall, before the Ladies' Sanitary Association, and in his last lecture, on "Nerves," he gave an account of the work of Gall in regard to the investigation of the brain. He not only says the doctor simplified the study of the anatomy of the brain, and its nomenclature, but he much improved psychological and physiological study, and more carefully analysed the faculties of the human mind than any of his predecessors. He made many important comparisons of the structure of the brain of man and the inferior animals, showing by many illustrations that the brain of man had an upper front portion superadded to that of the lower animals. The methods employed by Gall for ascertaining the localisation of the functions of the brain were, according to his own

account, nine. 1. That derived from common language, the language used by people themselves, and that used by others in speaking of them, obtaining thus an indication of character where he could, and then examining the unusual developments of parts of their brain, which, he inferred, were the seats of the peculiarities. 2. The counterproof, *i.e.*, seeking for depressions in place of elevations in the brains of those who had a dislike or a feebly-developed taste for the exercise of those pursuits, occupations, and amusements which were marked strongly in others. 3. The general conformation of the head dependent on these elevations and depressions, by which he first deduced a character and then studied whether he was right or not. 4. By obtaining casts of heads whose marked characters were well-known. 5. By making a collection of crania of different races. 6. By comparing the development of external parts of skulls with that of the brain. 7. By comparative anatomy and physiology of men and animals, going into such details as the conformation of the skulls of those birds which sing and those which do not. 8. By observation on the changes in faculties depending on a diseased state of the brain. 9. By a study of the succession of the arrangement of the organs of the brain. He found some characters peculiar to man, and some brain developments peculiar to man, and inferred the characteristics depended on the functions of these parts.

Br. Richardson remarked that it was open to doubt whether Gall, though a good anatomist, and a good reader of character, had done really more for the science named phrenology than to hit upon some happy coincidences; yet he conceded that Gall had given good general instructions for the study of character, and had probably defined such broad differences as mark out persons of strong perceptive power as apart from reasoning power. But after acknowledging so much, Dr. Richardson concludes that "it does not follow that there is any precise connexion in the manner he indicated between localisation of development of the brain and character." This is surely a little inconsequent. Dr. Richardson, so far as he has gone, finds Gall's investigations trustworthy. He was not a visionary or a charlatan, but an earnest scientific investigator, who hit upon some "happy coincidences." Is not the very essence of the inductive method a hitting upon "happy coincidences?" and would it not be more in accordance with a truth-seeking spirit to always pursue such a method than to denounce without knowledge and without inquiry, as is so often done nowadays by so-called Scientists? If phrenology is a farrago of error and nonsense, it must be easy to show that it is so. If it is founded on the very thinnest substratum of fact, it is the duty of the scientific man to point out exactly where the error comes in. That there is some substratum of fact is now generally acknowledged. Dr. Richardson grants that Gall was able to define "such broad differences as mark out persons of strong perceptive power as apart from reasoning power." Others acknowledge that the upper part of the brain is probably the seat of moral

power, and that the social feelings and emotions have their seat in the back part of the brain. Such views are constantly being expressed. This is all very well, and shows that men cannot blind themselves or be blinded for ever. But why not have the hardihood to go a little further, and not swallow a little more, but investigate a little more. Let Dr. Richardson, for instance (for he is evidently a man who does not care what is true so long as it stands upon sufficient basis), take half-a-dozen of the so-called "organs" of the phrenologist; let him take, say, Benevolence, Veneration, Firmness, Destructiveness, Philoprogenitiveness, and Cautiousness, and let him compare these organs in a hundred heads with the known characters of the individuals; and then, if he does not find some "happy coincidences," let him then say there is no precise connexion between localisation of development and character. This is the method the present writer pursued, and with a set purpose, too, to find phrenology all wrong; but while he found many things about the science, as it stands, hard to comprehend, and very many points on which light is needed, he is bound to assert that no one can investigate phrenology in the spirit and with the method in, and with which it should be investigated without finding an amount of truth in it absolutely startling when one considers the importance of the subject, and the blind apathy, or ignorant animus, with which it is treated by those to whom so many look for their scientific creed.

DOOMED TO MAKE AMENDS.

A CHRISTMAS STORY.

BY CAVE NORTH.

Oscar Sinclair—or St. Clair, as he preferred, being a little aristocratic, to write his name—was not superstitious; he was about the last person in the world that you would imagine to be nervous, or given to vague fancies; and though a man of considerable imagination, he had so much good sense that he was not likely to be carried away by anything of a visionary nature. At any rate, such you would have judged him to be, and so did all those who knew him.

Sinclair was an artist, as well as a dabbler in literature. His father had been an artist, and had brought his son up to his own profession. He was, at the time we make his acquaintance, living in South Kensington following his calling in an idle, desultory sort of way. Having started on his artistic career with great eagerness and much confidence in his ultimate success, he had worked for several years very diligently, and made not a little headway in his profession; but he had not made all the speed he had expected, and so

became somewhat disheartened. Besides he had had a little love affair that had tried him a good deal, but which he fancied had left him not much worse for the experience. He was, however, still feeling the after effects of the passion and the disappointment, which, on the whole, he thought were salutary; and he would sometimes find himself repeating with grim satisfaction the lines—

“’Tis better to have loved and lost
Than never to have loved at all.”

The story of this love affair was as follows. Several years previously he frequently met at the house of a friend, also an artist, a young lady of great beauty and intelligence, named Rose Beamish. She was the only child of a wealthy Irish gentleman, formerly an officer in the army, who, on his marriage, had settled on a little estate of his wife's in Northamptonshire. Mr. Beamish was now dead, and Rose lived with her mother and a maiden aunt in the old house, but frequently spent a week or two in London with a former school-mate, now the wife of Mr. Melville, Oscar's artist friend. Mrs. Melville made no secret of her wish to arrange a match between Sinclair and her friend. But there was no need, as it proved, for her kind offices as match-maker, a mutual passion seeming at once to spring up between Sinclair and Rose Beamish; and as the acquaintance ripened, their affection grew and strengthened, so that, without any actual troth-plighting having taken place, it was tacitly understood that they were as good as engaged.

Meanwhile the young lady was called suddenly home, and Oscar for the first time felt that there was a terrible blank in his life. A correspondence, however, was opened, and for a few months the course of true love appeared to run smooth enough. But after a time Rose's letters became fewer and considerably cooler, and finally ceased altogether. Oscar wrote one letter after another, thinking Miss Beamish might be ill, but received no answer, until one day the post brought him a short but precise note in her handwriting, intimating that she thought they had been too hasty in their love-making, and desiring that the acquaintance should be broken off.

This communication fell like a thunder-clap upon poor Sinclair. He was astonished beyond anything, and, look at the thing as he would, was puzzled to distraction. He would have appealed to the Melvilles, but they had gone abroad, Mr. Melville having a commission to paint a series of pictures of Spanish scenery. After considering the matter from every possible point of view, the young man thought the best way

would be to run down to Northamptonshire, seek an interview with Miss Beamish, and ask for an explanation. Still hesitating, however, he allowed a couple of weeks to elapse before coming to a final determination. When he arrived at G——, near which place the Beamish estate was situated, he found the family absent, and was informed that they were on the Continent ; in what part he could not learn. Sinclair turned his back on the fair village with bitterness in his heart, and on his lips a sarcasm on the fickleness of woman's love.

It was a terrible blow for the poor fellow. He felt that in the course of one short year he had been cured of all illusion with reference to life, and that henceforth it was to be to him but a plain, matter-of-fact sort of thing. It might have its pleasures, but they would be none of your "new-born blisses"—none of the joys you climb for up dizzy paths, but those only you find by the wayside as you pass along the high-road of life. So, after a time, he settled down to his profession in a kind of humdrum way, now doing a bit of painting, and now laying aside the palette for the pen ; satisfied always if he earned the wherewithal to pay his way, and have a few oboli in his pocket to boot. His writing was of a very humble description, consisting, for the most part, of an occasional article for the reviews, or a short tale for the magazines. But he was fond of writing, and as he had an easy and cultured style, his literary friends frequently asked him for a contribution, or sent him a package of books for review.

Thus he had gone on, until he had nearly completed his third decade, and was beginning to think he was becoming an "old fellow," when a circumstance, or rather a series of circumstances happened, which, in a manner, changed the whole tenor of his life. It would be incorrect to say that he had quite forgotten Rose Beamish, and the bright, almost dazzling bit of sunlight she once shed over his life. It occurred to him sometimes, but more as a dream than anything else. Living amid the same scenes, and tumbling from time to time upon objects that recalled old associations, how was it possible for the episode to be altogether obliterated from his memory ?

There was one spot in particular in Kensington Gardens which he had long avoided, because of the painful feelings it called forth. He would make a detour of half a mile rather than go near it. Indeed, he had never been within gunshot of the place for over four years, until he chanced to stumble that way one evening in the autumn when our story opens. He had been writing hard all day, and had gone out for a stroll in the Gardens, which were but a couple of minutes' walk from his lodging, in order to freshen himself up, and collect

his thoughts. Almost unconsciously, he took the path he had so often taken with Rose Beamish, being, as it was, a short cut from his home to Melville's, whose residence, when in town, was in Bayswater.

He was striding slowly along, observing, more than anything else, the dead leaves covering the ground, when suddenly he was aware of someone near him. Looking up quickly he perceived a rather tall, and somewhat gentlemanly-looking man, with large, strangely-bright, almost phosphorescent eyes. He seemed at first as though he were coming right up to him, but when within a pace or two he turned suddenly aside, and walked away in an oblique direction. Oscar had only taken a casual glance at him in passing, but that glance was enough to set him thinking he had seen that figure and face, and especially those eyes, before. Following up his train of thought, he involuntarily turned to take another look at the stranger; but he was nowhere to be seen. He had probably passed among the trees, thought Sinclair.

The artist took a longer walk than he had intended, and when he reached home it was quite dark. Going in at the gate he again observed the figure of the man with the large, bright eyes. This time he brushed close past Oscar, so that their garments touched. His eyes seemed larger and brighter than before, and there was altogether a mysterious air about him.

For the remainder of that evening Sinclair could not forget the bright-eyed stranger. There was something so peculiar about him that his appearance would probably have impressed anyone, but the artist could not rid himself of the notion that he had met him somewhere before that evening. He tried hard to think where, but in vain.

Next morning Sinclair received a letter announcing the serious illness of his mother, who, since her husband's death, had lived with a married daughter about a hundred miles from London. His sister, who wrote, begged him, if he wished again to see his mother alive, to lose no time in coming. Oscar took the earliest train, but arrived too late, his mother having passed away during the night. He remained until after the funeral, and then returned to town, travelling by a late train.

Another gentleman and himself were the only persons in the compartment when the train started. After a few minutes' conversation together they both lapsed into silence, Oscar occupying himself with a book he had brought with him to while away the time, and his *vis-à-vis*, who seemed like a

commercial traveller, burying himself behind a newspaper. But the light was poor, and Sinclair soon went off into a doze.

How long he napped he could never exactly tell, but he suddenly found himself awaked out of an uneasy slumber by a jolt of the carriage, the restarting of the train, or something of the kind. He rubbed his eyes and looked around, and—could it be possible? Yes, there was the man with the large gleaming eyes! He sat on the opposite side of the carriage, on the seat next the door, so that their eyes naturally met. Sinclair felt something akin to a shudder run through his frame as those glazed orbs met his. He was glad that the third person was there, but wished he would wake up, for he, too, had gone off into a nap. The inclination was strong to let his book fall on the sleeper's foot, in order to awake him, but he was afraid the stranger would see it was done on purpose. He tried to read, but in vain, the eyes of the man in the corner seemed to pierce through the book.

"Confound the fellow!" exclaimed Sinclair to himself. "I must put a stop to this or I shall be making a fool of myself."

Then, addressing the man with the phosphorescent eyes, he said:—

"They supply very poor lights in these carriages. There is just sufficient illumination to tantalise one into the hope of being able to while away the time by reading."

The stranger bowed slightly, but made no further reply.

"I wonder," continued Oscar, "they don't light the first-class carriages better, if only on the chance of getting a few persons to pay the extra fare in order to be able to read on a long journey."

Still the stranger only bowed in a shadowy, indistinct sort of way.

Sinclair felt exasperated, and again exclaimed to himself, "Confound the fellow!"

Then throwing himself back in his seat he disposed himself for another nap. But sleep was out of the question: that pale, marble face, with its bright glowing orbs, would have driven slumberous heaviness from the eyelids of a Barbarossa. He was about to make another effort to read when the traveller awoke, and they again got into conversation. Every now and again, however, the artist could not help casting a sidelong glance at what he could not help considering the mysterious man in the corner. He noticed that his companion never once turned his eyes that way, and he wished to draw his attention to the new corner, but did not know how to manage it. Presently the conversation flagged, and Sinclair fell into a kind of reverie, in which his thoughts went back to

the happy days of love and Rose Beamish. One blissful scene after another rose up before his mind's eye, and for a moment he enjoyed them all over again. At last his memory re-pictured to him Rose and himself seated together on the terrace overlooking the river at Hampton Court, whither they had gone one beautiful summer afternoon with Mr. and Mrs. Melville and several others. While they talked together, forgetful in their happiness of all the world beside, someone passed who made Rose start. Oscar was turned towards her at the time and did not see the person until he noticed the young lady's agitation, and looked to see what had caused it. It was a tall gentleman, with somewhat large and prominent eyes, who gazed upon the two lovers with anything but a pleased expression.

No sooner had this scene recurred to Sinclair's mind than he felt a mental shock; he involuntarily turned his eyes toward the stranger in the corner. It was the same man, only the eyes were brighter. He had felt a kind of dislike to the man since the first time they met in Kensington Gardens, but now he experienced a positive aversion; for he remembered that after the meeting in Hampton Court Gardens, he asked Rose who the gentleman was whose appearance had so agitated her, and that she replied with a kind of forced laugh, that it was a gentleman who wanted to marry her, and had told her the Fates had promised her to him; though, such was her affection for him, that she intended to disappoint both him and the Fates. He had intended to ask her something more about him, but the rest of the party coming up at the moment prevented him, and the occurrence was forgotten.

While Sinclair was yet revolving the subject in his mind the train went thundering into the London terminus. He jumped out of the carriage and hailed a cab. As he was about to enter it he looked round to see what had become of his glittering-eyed fellow-traveller, but he was nowhere to be seen.

For the next few days Miss Beamish and the man to whom the Fates had promised her were often in Sinclair's thoughts. Although, as stated above, he was not at all inclined to be superstitious, yet he could not help remarking the coincidence of his meeting this man on three different occasions, and wondering if anything was to come of it. Nor could he help dwelling on his never-to-be-forgotten love episode a little more than usual, and possibly regretting it a little. A few days, however, were sufficient to relegate the whole affair into the background of memory, and he thought no more of the mysterious stranger for a couple of months or more, when he again made his appearance in a most unaccountable manner.

Sinclair had some months before given a promise that he would spend Christmas with a friend who resided near to Patterdale, on Lake Ulswater. He started a few days before Christmas, and arrived safely at Penrith. The only means of getting thence to Patterdale was either by hiring a chaise or going with the post. Oscar decided on the former, and started about noon the day before Christmas-eve. It was a dull, heavy day, with neither sound nor sight to cheer the scene or enliven the sense. There had been neither frost nor snow; but a heavy mist enshrouded the mountains and hung about the trees, which were wet and dripping, making everything appear chill and comfortless. The road was exceedingly rough, and, as luck would have it, the front axle-tree of the chaise came to grief about a mile from Greta, at the northern end of the lake. There was nothing to be done but for Oscar to walk on to the village, and take his chance of finding a vehicle to take him on to his destination that night. It was quite dark when he reached the village inn, and as he found that there was no possibility of getting forward that night, he made up his mind to be as comfortable as possible under the circumstances, and ordered dinner. He was shown into the best room of the inn, a large, low-ceiled apartment, quaintly, though pleasantly furnished, and was ere long sitting with a cigar and a favourite author over a cheerful fire.

The night had turned out as stormy as the day had been dreary. The wind howled in fitful gusts about the house, driving the rain against the windows, and making the dark waters of the lake lap and beat upon the shore. The melancholy sound of the elements, together with the somewhat sad tone of the chapter he was reading, tended to put the artist into a sombre mood; and almost before he was aware of it his book had dropped upon his knee, and he was gazing into the fire, half unconsciously fashioning a dream to suit the mood and circumstance of the moment.

He had sat thus for some time when, without the least warning, the door opened and a gentleman was ushered in. Oscar looked up and fairly started to find that it was the mysterious stranger. There was no mistaking that marble-like face and those gleaming eyes, although almost hidden amid winter wrappings. The fresh arrival perceived Sinclair's surprise, and something approaching a smile passed over his solemn visage as he bowed in salutation. Oscar inclined his head in response, but somehow could not shape his lips to speak. The stranger seated himself by the fire opposite to the artist, and gazed for some time abstractedly into the flames, which were dancing and playing around a huge yule log.

Sinclair watched him intently, and thought what a charming companion this was to spend the evening with. He had an opportunity of observing him more narrowly than he had been able to do before. His hair, he noticed, was somewhat grey, and there were deep furrows across his brow ; his eyes appeared to be of a pale blue colour, and so animated that they seemed to draw all expression from every other part of his face, which, save for a pervading air of sorrow, was almost characterless.

The stranger sat brooding over the fire so long that the silence became oppressive, and so to break the spell Oscar remarked, as an unusually heavy gust drove the rain against the window :

“The night has turned out very stormy.”

The mysterious stranger fixed his large eyes intently upon the artist, and said, in a kind of guttural tone, “Yes, very,” but said no more.

Another spell of silence ensued.

Sinclair felt that he could not stand this, and laid his hand on the bell-cord, in order to ask to be shown to his room. The stranger, however, perceived his intention, and motioned him to desist. Oscar withdrew his hand from the cord, and the stranger then said, in the same guttural tone :

“Your name is Oscar St. Clair.”

“Yes,” replied the artist coldly, “St. Clair or Sinclair—as you like.”

There was then a pause, during which Oscar wondered what would come next.

“You once knew a lady named Rose Beamish?”

This was said by the stranger in an inquiring tone. Oscar started. His first impulse was to rebel against this catechising, but he answered—

“Yes : what then?”

“You have not, perhaps, heard that she is a widow?”

“I did not even know that she was married.”

“No?”

Oscar nodded negatively.

“She was married three years and a half ago.”

“To whom?” asked Oscar, affecting but slight interest.

“To a half-cousin, who was the heir to her father’s estates in Ireland.”

“Then I suppose she married to keep the estates in the family,” said Sinclair, with marked sarcasm.

“It was the wish of the family.”

“Of course ; and the gentleman, you say, is dead?”

“Mr. Brandrem died about six months ago.”

"And where is Rose—where is Mrs. Brandrem now?"

"At Dieppe. She has lived there ever since her marriage."

Another pause ensued. Sinclair wanted to know all about Rose, but he did not like to ask this strange man to tell him. He felt that he still loved her more than he could have thought possible; but he also felt that a great wrong had been done him, and that under the circumstances it would be best to let the past be.

"You are indifferent as to the present position and welfare of your former love?" said the stranger at length, still speaking in the same imperturbable manner.

"No, not exactly," answered Oscar, trying to speak with an appearance of indifference; "I should like to hear about her; but I am at a loss to know why the matter interests you so much."

"You will know—you will know!" answered the stranger, with some hastiness of manner. "But listen to me now; I have a message to give you."

"A message!" exclaimed Oscar. "From whom? Rose?"

"No, not exactly from her, but from one very near to her—but listen!"

Sinclair was annoyed at the interference of this mysterious stranger in matters which were exceedingly painful to him; but though he felt inclined to resent it, some how he could not. Look at it as he would, there was no mistaking the fact that he was fascinated by him. Could it be, Oscar asked himself, that he was under the malign influence of the evil eye? Whatever it was, he felt that, like the ancient mariner, the stranger—

"Held him with his glittering eye,"

and he could not but listen.

"You must go to Dieppe," said the stranger, after a pause.

"Why?" asked Sinclair.

"Because she would like to see you."

"I cannot do it."

"You will change your mind when you hear what I have to tell you."

"May be: but tell me what you have to say, if anything; it is getting late;" this somewhat impatiently.

"You never knew why Rose Beamish cut you so suddenly?" observed the stranger.

"No," replied Oscar, biting his lip. "A bit of feminine fickleness, I suppose."

"There you are unjust."

"If so, I err in good company. But perhaps the lady had

good enough reason for what she did. My father had no estate in Ireland, nor my mother in Northamptonshire; and I am but a poor artist."

"Your second suggestion is worse than your first: Miss Beamish was not mercenary. She may have been weak in taking the course she did, but she had cause."

"Indeed! It might be interesting to know the cause." Oscar tried hard to appear nonchalant.

"A relative of hers, who had been fond of her from his boyhood, and had been several times refused by her, invented a scandalous story respecting you, and made so circumstantial an affair of it, with the aid of a friend and some forged letters, that it was impossible for her to disbelieve it."

"And pray what was the story?" demanded Sinclair, suddenly aroused out of his assumed indifference.

"That the model you so frequently had at your rooms was your mistress."

"And Miss Beamish believed that on the sole authority of her lying relative!" exclaimed Sinclair, starting from his seat, and fixing a look on his *vis-à-vis* that was almost fierce.

The latter, he thought, shrunk beneath his glance. He answered, however, in the same quiet manner as before —

"No, not quite. He bribed a person who knew you well to bear out the story."

"And who was that person?"

"Bob Wyman."

"The scoundrel!"

"You may well say that," said the stranger, whose dreamy gaze again sought the fire.

Oscar watched his companion attentively for a moment or two, and then said:

"And what was the reward of this rascally half-cousin? I suppose Miss Beamish gave him her hand for his treachery?"

"She did."

"I hope she was happy with him!" This was said with all the scorn of which Sinclair was capable.

"She was not. The three years of their married life was one long scene of misery. Her husband's love had been pretty well turned to hate before he won her. He married her to prevent anyone else from doing so, and to punish her for having so long and so persistently turned a deaf ear to the pleadings of his passion."

"You astound me! And did the villain dare wilfully to do anything to make her unhappy?"

"The truth must be confessed: he did. Never was a woman more deceived in a man—never a woman more punished for

despising a lover. Her life with him was a long and cruel penance. Indeed, the greater portion of the time, though under the same roof, they lived apart."

"And does she know of the deceit that was practised upon her? Does she know, that is, how I was traduced?" asked Oscar.

"Yes; Wyman betrayed the secret, because Brandrem refused to give him more money. He had already given him, at different times, several hundreds of pounds."

Sinclair was silent for a minute or two. He then said,

"Can you give me Mrs. Brandrem's address?"

The stranger did not exactly smile; but something analogous to a smile—although a bitter one—appeared on his face. "I thought you would change your mind," he said; "I will write you down the address."

"Have you anything further to tell me?" asked Sinclair, after a pause.

"Nothing, but that she loves you still, and that she suffers for the wrong done to you."

Oscar felt his heart give a great bound; but he curbed his emotion as best he could. Stepping to the window, he looked out into the night. The storm had somewhat abated, and the moon was sailing majestically amid rifted clouds. He had gazed for a few minutes, his mind full of strange and conflicting thoughts and emotions, when it occurred to him that his strange companion had not given him his name. He turned round to ask it, and began,

"You have not done me the pleasure ——."

But he stopped suddenly short—and no wonder! The stranger was gone! And yet Oscar had neither heard the door open nor shut, nor any sound whatever. He did not know, at first, whether to be angry or not; but he thought, "Well, he should see him again in the morning," and so decided to retire. His bed-room was a large one, with a low ceiling, so that, put his candle where he would, there were large spaces of darkness left, and out of every one of them faces like that of the stranger gleamed and grinned. Oscar was not a timorous man by any means, nevertheless he was glad to get beneath the bed-clothes, where, as in the bye-gone days of childhood, there seemed to be safety.

Next morning the artist expected to see his acquaintance of the previous evening join him at breakfast; but he did not, and when he asked if the gentleman had already left, no one seemed to know anything about him. The circumstance became a little perplexing, and so, determined to get to the bottom of it if possible, Sinclair went to the landlord, and

asked him who was the gentleman whose company he had had the previous evening. The worthy Boniface, however, could not enlighten him ; it might, he said, have been Mr. Saunders, from the Hall ; he did not know of anybody else who would be likely to drop in in that way. But the description of the two men did not at all agree. "More mystery," thought Sinclair.

The day turned out a very beautiful one, as December days in England sometimes will. Scarcely a cloud obscured the sky, and every peak and cleft of the mountains was distinctly visible. The lake, too, was calm, its bosom having the appearance of a broad expanse of emerald, broken here and there into white foam-like flakes.

Sinclair enjoyed the beauty and freshness of the landscape with the eye of an artist. He felt quite exhilarated after the depression of yesterday, and had almost forgotten his experience of the previous night, until, just as he was approaching his destination, he happened to put his hand into the side pocket of his overcoat and found there a scrap of paper. To his great surprise it bore the address :—

"Mrs. Brandrem, Mon Nid, Dieppe, France."

He now remembered, what he had hitherto forgotten, that the stranger had promised to give him Mrs. Brandrem's address. He now wished his visitor had not left him so abruptly. There were several things he had omitted to ask him. He wanted to know his name, his relation to Rose, and so forth.

Sinclair stayed with his friend a week, and then returned to town. A fortnight elapsed, and though not a day passed by without his thinking of Rose and the message he had received respecting her, he had not yet made up his mind whether to go and see her or not.

About this time our friend happened to meet Melville, who, after a long residence in Spain and the South of France, had returned to his old quarters in Bayswater. Oscar told him and his wife about Rose and her bereavement, and the curious way in which he had learned about it. Mrs. Melville's instant advice was :

"Go and see her. You need not fall in love with her again, you know. She does not deserve that. But there is no telling what consolation it may be to her to acknowledge the error into which she fell, and so, in some degree, remedy it."

Mr. Melville's opinion on the subject, vouchsafed after mature deliberation, was not given with so much assurance. He was not sure whether it would not be a bit cruel to bring up the past so vividly just, as it were, on the heels of her affliction.

Sinclair and Melville at the time this conversation took place were walking in Hyde Park. It was evening, and there were skaters on the Serpentine, with crowds of people on the bank looking on. At length, Oscar said :

"I had thought seriously of going over ; but I think your view is a reasonable one, and so I shall wait."

They were threading their way through the throng and talking in a low tone. Scarcely had the words passed Oscar's lips ere he saw the mysterious stranger at his elbow. It was but the apparition of a moment. He seemed to be borne against Oscar by the crowd, and then carried out of sight by it. But there was no mistaking the figure, and especially that lambent, gleaming eye. Then there were the words : "Why don't you go ?" uttered in that low guttural tone which had so struck Sinclair at Greta. Oscar would have answered—would have arrested the mysterious personage, but before he had recovered his presence of mind the unknown one had disappeared.

"Whom do you seek ?" asked Melville, seeing him turn round.

"Didn't you see the man who spoke to me ? It was he—my Greta friend !"

"I thought someone spoke to you, but I cannot say that I really saw the person."

"Come, let us turn back a step or two. I should like to see him again," said Sinclair. "There are several things I want to question him about."

They turned round and went back some distance, but saw nothing of him they sought.

"What did he say to you," asked Melville.

"He said, 'Why don't you go ?' that's all."

Melville thought for a few minutes and then said :

"There is something strange about this affair. On second thoughts, if I were you, Sinclair, I think I should go."

"That is just what I have been thinking myself since this last *rencontre*," answered Oscar.

A few days later saw Sinclair on board the Newhaven and Dieppe packet, and the following morning a guest at the old-fashioned little hostel La Foison d'Or, in the quaint Norman seaport. Of course he made due inquiry as to where "Mon Nid" was situated ; nor had he any difficulty in finding out all particulars. He deferred his proposed visit, however, until the next day, and the next day until the following. The fourth day he felt that he must pay his visit. He accordingly sallied forth for the purpose, but before he had gone far he changed his mind and turned back. Going across the market-

place or square, near the cathedral, with his head bent down, as if in a brown study, Oscar ran almost full butt against some one—a lady, as it proved. A merry titter from a bright-eyed maid-servant, who was accompanying her, tended to increase the artist's embarrassment. He raised his hat and muttered a few words of apology, and was hastening away, when a sudden exclamation caused him to turn round again. His astonishment may be imagined at seeing Mrs. Brandrem before him—the Rose of other days! But how different! Pale and in widow's weeds—she seemed like a very lily by the side of her rosy maid.

How describe the young widow's confusion? She exclaimed—"Mr. Sinclair!" and for a moment expression hovered betwixt smiles and tears. Oscar was almost as much moved, but he more readily recovered from his surprise.

"I was just thinking about you," he said.

"Were you?"

"Yes; to tell the truth, I was about seeking your residence, but turned back."

"Why did you turn back?"

"I hardly know. Because, I suppose, I was to meet you here."

Conversing thus, as they walked side by side, they had soon reached the outskirts of the town. Oscar proposed to return; but Mrs. Brandrem begged him to accompany her home: her mother and aunt would be so pleased to see him, she said. He consented, and in the course of a few minutes they had reached the house, a pleasant white, tree-shaded cottage on a green knoll overlooking the sea and the town. Mrs. Beamish was a pleasant, light-hearted matron, and her sister, "Aunt Hilda," as Mrs. Brandrem called her, a quiet, genial lady of fifty. Sinclair was at home with them at once, and soon became quite intimate in the family. Mrs. Beamish made no pretence of mourning for the death of her son-in-law.

"Heaven forgive me for saying so," she would say; "but a happier riddance never gladdened the earth."

Sinclair remained several weeks at Dieppe, under the pretext of wishing to paint some marine views in the neighbourhood. He did, indeed, make sketches of some charming bits of scenery about Cape Grisnez, Fechamp, and other places. But his chief attraction was "Mon Nid."

At length, he felt that it was time for him to return to London, and he fixed on the day for his departure. The evening before, he paid a farewell visit to the ladies of "Mon Nid." Hitherto he had said nothing to Mrs. Brandrem about the mysterious stranger who had been the cause of his coming

to Dieppe ; and he now debated seriously in his mind whether he should say anything to her on the subject or not. Nothing, either, had been said about the deceit practised on Rose by her husband, and which had been so curiously divulged to Oscar. The latter could easily understand Mrs. Brandrem's reticence on the subject ; it would have been out of place for her to seem to want to explain that something which had now been cleared up had caused her to withdraw her affection from him. For him it was sufficient that she knew he had been maligned. There was that in her quiet sympathy, and in her tender melancholy, that told him she would have poured out her heart to him if she could, that she would have told him all, however painful it might have been. This was one reason why Sinclair resolved to quit Dieppe ; for he feared that the longer he stayed, the greater risk he ran of hastening on some such painful explanation.

The evening had passed very delightfully. The two elder ladies were charming company, and they had a pleasant circle of friends, several of whom, Father Felicien, a clerical friend among them, had dropped in, so that the evening wore on quicker than Oscar was aware. Towards ten he rose to take his leave. Mrs. Beamish and Rose accompanied him to the door, the former to invite him once more to return in the summer, the latter to give him another " God speed."

It was an entrancing night ; from the town, and the sea which lay below them, came an inarticulate murmur, as of muffled music, while moon and stars seemed to brighten as they heard. The sentinel elms sighed as though moved by the ghosts of human memories, instead of the wind.

Each stood on the gravel fronting the door, for a time, as if enchanted, so beautiful was the scene ; Rose and Oscar stood side by side, Mrs. Beamish a little to the left of the latter. Suddenly Sinclair was aware of a figure approaching out of the shade of the trees. He felt a shudder run through his frame, more akin to one of dread than he had ever felt before : being afraid of the shock on Rose, he instinctively drew nearer, as if to protect her. He had scarcely turned his eyes upon her ere she, too, saw the figure. Starting like one suddenly stung, she cowered towards the artist, and convulsively clutched his arm. He threw his right arm protectingly about her, holding up the other as if to ward off danger. Rose's eyes were steadily fixed upon the figure, which, though indistinct and ghost-like, bore, Oscar thought, a resemblance to the strange person who had, on several occasions, so mysteriously put himself in his way. There was hardly any mistaking the lustrous eye, and—as the figure drew nearer—the tall,

spare form and marble face. At length Oscar was sure it was he. He felt Rose shudder violently.

Mrs. Beamish noticed her daughter's excitement, and exclaimed, coming to her side,

"What is the matter?"

Sinclair pointed to the intruder; and Rose whispered, with bated breath, "Gilbert!"

"What? Where?" exclaimed Mrs. Beamish, peering round into the darkness.

"There," said Oscar, pointing to the spot where the stranger stood almost within touch. Then summoning courage, which for a moment had failed him, he exclaimed:

"Well, sir, what other communication may it please you to make?"

Though Sinclair had been pleased to receive the information the man had previously given him, he felt that this intrusion was a little too much.

The stranger, however, did not reply to the challenge, but approached still nearer to the group. Mrs. Beamish, following the fixed gaze of her daughter, now seemed to see him for the first time. The effect the sight had upon her was to cause her to utter a loud shriek and then fall down in a swoon.

"What could the fellow be who caused so much terror?" thought Sinclair. His impulse was to rush at him and shake him, but he could not release himself from Mrs. Brandrem, who leaned on him like one petrified. She looked, too, more like one dead than alive.

The person she called Gilbert, now within arm's length, knelt down at her feet, and held out his hands with an imploring look. With a convulsive effort Rose disengaged herself from Oscar, stepped back a pace, and holding up her hands as though to protect herself, exclaimed in a tone of agony:

"Away! away! In God's name, away!"

The kneeling figure now opened his mouth for the first time. It was to utter the word "Forgive!" The voice was a hollow guttural one, almost like the voice of one speaking from a vault.

Again Rose bid him "Away!" her voice this time rising into a shrill shriek, and prolonging itself into a wail as she fell backwards like one dead. Sinclair caught her in his arms.

The next moment every one in the house had rushed forth, terrified by Mrs. Beamish's screams. There was Aunt Hilda, Father Felicien, and the rest, all demanding what was the matter. Everything had taken place so suddenly that Sinclair was like one dazed. His attention was so much taken

up by the apparently lifeless form in his arms, and the now gradually retreating figure of the causer of all the trouble, that he could not frame an answer to the many queries put to him.

"Take her," he said hastily; and when relieved of his beloved burden he walked towards the intruder, who moved slowly backwards whence he had come, all the while keeping his lambent eyes fixed on Oscar.

After the gravel there was grass, then another narrow gravel path, and grass again, bounded by a shrubbery, but no way from the grounds. The retreating figure had nearly reached the shrubs, and Sinclair was almost within arm's length, when—

What was it made him shudder, and caused his hair to feel as though on end?

Oscar Sinclair walked back into the house, whither the two swooning ladies had been borne, and those who noticed his entrance remarked that his face was ashy pale, and that beads of perspiration covered his brow. But nearly all were too deeply concerned about the ladies to heed him much.

Mrs. Beamish presently came round, but it was long, and not until medical assistance had been procured, that Rose did. The shock had been so terrible that it nearly proved fatal. Sinclair paced about the hall, and up and down the *salon*, listening—waiting in the intensest agony for news of her condition. The tail of the Bear was low in the north, and the moon sagged very near the horizon, when at length the venerable Æsculapius came down and announced that he thought his patient was out of danger, though still in a condition to need extreme care.

"She must be allowed to be perfectly still, and to sleep if she can," he said to Aunt Hilda. "And please send to me instantly if any unfavourable symptom should occur."

Aunt Hilda promised implicit obedience to his every injunction.

"Perhaps Monsieur," he said, turning to Oscar, "will walk with me a few minutes."

Oscar assented, and when outside the doctor said—

"Tell me, if you can, what was the cause of this double fright. Both the ladies talk as if they had seen a ghost: What was it? No little thing could have caused such an upset."

Sinclair narrated the whole scene as it had occurred, and how he followed the retreating form of the intruder to the shrubbery.

"And what then?" asked the doctor with some eagerness.

"He disappeared!" said Oscar briefly.

"Disappeared! How?"

"I cannot tell you how. I only know that he vanished—melted away before my eyes."

"Strange!" said the doctor, as though still incredulous; then adding, after a pause—"Did you see any likeness in this person to the deceased husband—to Mr. Brandrem?"

"Brandrem!" exclaimed Sinclair, a new light breaking in upon his mind; "I did not know him."

"A tall, spare man," said the doctor.

"He would answer that description," replied Oscar.

"Umph!" was all the doctor replied.

Sinclair prolonged his stay at Dieppe another week. By that time Rose had quite recovered from her shock. She and her mother and aunt saw him on to the boat which was to carry him back to England. He thought he had never seen her look so beautiful. There was the beauty that belongs to all that is young and fair, and there was the added charm that arises from the budding and blooming of a soul that has been quickened with sorrow. He longed to tell her what the ghostly apparition of her dead husband had told him at Greta, namely, that she still loved him, and to ask for her assurance of the fact; but prudence bade him be silent, for the present at least. But he saw the tears well up into her eyes as he said "Good-bye"; and he knew, however long it might be ere they met again, that the casket would keep its treasure for him this time.

But it was not very long before their next meeting took place. In due course Christmas came round again, and with it came an invitation for Sinclair to spend the holidays in Northamptonshire, whither the family had returned. When he arrived at G—— Station, Oscar was surprised to find Melville waiting for him. They walked to the house over the fields, leaving the carriage to take on his luggage. On the way Melville told his friend that he and Mrs. Melville had accidentally dropped upon Mrs. Beamish, her sister, and daughter at Trouville in the autumn, when they were invited to spend Christmas with them. They had, he added, been in Northamptonshire over a week.

The old house was looking very bright and cheerful when they arrived; and Oscar received a hearty welcome from everybody. Rose had recovered something of her old brightness and bloom, and looked, if possible, more charming than ever. During the evening some mystery was made about a picture which Mr. Melville had been painting as a Christmas present for Mrs. Brandrem. He left the company for a couple

of hours during the evening, and locked himself up in the room which had been set apart as his studio, so that he might, as he said, put the finishing touch to his work.

When at length he rejoined the company, every one anxiously inquired if the picture was finished. He replied that it was ; but as it was for a Christmas present, he could not allow it to be seen until the clock had struck twelve. Presently the old clock in the hall announced the witching hour. At the same moment the church bells in the distance were heard breaking into a merry peal.

Mr. Melville immediately rose, and invited everybody to accompany him to his studio. He led the way with Mrs. Beamish, the others followed, and Oscar and Rose brought up the rear. Arrived in the studio, a half-circle was formed about the easel on which the picture stood covered up. Rose stood a little within the group, with Oscar on her right. When all were ready, Mr. Melville quietly withdrew the covering, and a murmur of admiration ran through the company.

It was a symbolical picture, and represented a spirit toiling to undo a wrong it had done to two young people. Its penance was that it could not rest—could not leave earth until it had brought together those it had parted. Each step in the accomplishment of this object was depicted, and when at length the reunited pair were joined at the altar, the rejoiced spirit was seen receding from earth.

Rose was deeply affected by the picture ; Oscar, too, was moved, for it brought vividly to his memory those strangely mysterious, and altogether unaccountable experiences which had been the means of bringing him and Rose together after years of separation. They were standing close together, and somehow their hands touched ; the next instant they were gently clasped. Presently the voice of Mrs. Beamish was heard, saying—

“Come, let us go back to the drawing-room ; it is not warm here.”

Immediately there was a move that way. Oscar and Rose lingered a moment behind, and before they rejoined the rest in the drawing-room, Oscar had taken the opportunity to ask his companion the question :

“Shall it be so, Rose ?”

And she replied very quietly—

“Yes, if you wish it, Oscar.”

And so it happened that in a very few weeks' time another merry peal rang out from the tower of G—— Church, this time for a happy marriage.

DEJECTION.

The rain had fallen all the day ;
 The blackbird perched upon a spray
 And sang his full and lightsome lay :
 The while I tarried in my room,
 And brooded there in silent gloom,
 As though the world were all a tomb.
 But when the clouds at sunset broke,
 And fled away like driven smoke,
 And gladness on all sides awoke,
 A gleam of joy pierced through my breast,
 And stilled the dreary, dull unrest
 That had me all day long oppressed ;
 And then methought a voice I heard,
 Which said : " How soulless and absurd
 To be less cheerful than a bird ! "

J. W.

Facts and Gossip.

A "TRANSLATION" of the remains of Lavater was carried out in Zurich on Monday, December 12. Lavater died January 2, 1801, from the wound given him three months earlier by one of Massena's soldiers, and was buried in the St. Anna-kirchhof. As the churchyard is about to be used as a site for new buildings, the coffin of Lavater was taken up and placed in a new grave. Lavater is chiefly known in England as the author of the once famous treatise on physiognomy, with its rich illustrations.

MR. J. W. COATES, of Glasgow, has republished, in sixpenny form, Sylvester Graham's pamphlet on "Chastity." As it has been for some time out of print, some of our readers may be glad to learn that it is now obtainable.

A CONTEMPORARY gives the following hat measurements of the heads of several eminent men :—


Lord Chelmsford	$6\frac{1}{2}$ full	Earl Russell	$7\frac{1}{4}$
Dean Stanley	$6\frac{3}{4}$	Lord Macaulay	$7\frac{3}{8}$
Lord Beaconsfield	7	Mr. Gladstone	$7\frac{3}{8}$
H.R.H. the Prince of Wales	7 full	Mr. Thackeray	$7\frac{3}{8}$
Charles Dickens	$7\frac{1}{8}$	Louis Philippe	$7\frac{3}{4}$
Lord Selborne	$7\frac{1}{8}$	M. Julien	$7\frac{3}{4}$
John Bright	$7\frac{1}{8}$	Archbishop of York ...	8 full

To transfer the above data into more generally understandable figures : $6\frac{1}{2}$ hat measurement signifies a circumference of $20\frac{1}{2}$ inches ; $6\frac{3}{4}$, a circumference of $21\frac{1}{4}$ inches ; 7, 22 inches ; $7\frac{1}{8}$, $22\frac{3}{8}$ inches ; $7\frac{1}{2}$, $22\frac{3}{8}$ inches ; $7\frac{3}{8}$, $23\frac{1}{8}$ inches ; $7\frac{1}{2}$, $23\frac{1}{2}$ inches, &c. No one with but a smattering of phrenology would have appointed a commander-in-chief of an army with a head only $20\frac{1}{2}$ inches in circumference.

THE
Phrenological Magazine.

FEBRUARY, 1882.

THE RIGHT HON. HENRY FAWCETT, M.P.

 HERE are so many open (as we may call them) and striking proofs of phrenology, that they should tell powerfully with those who are seeking for the truth, and lead them to investigate further. Some, however, are wilfully blind to phrenological facts, as, indeed, they are to all facts which do not accord with their philosophy (if an opinion compounded largely of ignorance and prejudice can be called by such a name); they have been taught to disbelieve it, and as they never venture to investigate or think for themselves they are quite content to repeat the word "humbug" because some parrot before them repeated it. We are constantly hearing some of these disbelievers cry: "It can't be true, because So-and-so has proved the brain to be so-and-so." Although the views of anatomists and physiologists with reference to the structure and functions of the brain are changing almost from day to day, and have been for the last twenty-five years especially, yet these pretenders to absolute knowledge constantly argue as if they knew the brain, its structure, and its functions, as well as they know the contents of their own bread-baskets. Lord! how intimately they do know all about the brain. And yet take up one of their books on the subject—how vague and unsatisfactory! There are many patient and admirable workers in the field of cerebral anatomy and physiology, and they are doing good work; nor have we any fear of any truth they may discover, let it be in favour of or against phrenology; provided it be established as truth, we will hail it with delight. What we deprecate is their jumping beyond their rule and line, and because they cannot find on the surface of the brain spaces chalked out and labelled, as the phrenologist labels his bust, their crying out, "Look here! there are no divisions here, no labels! What can you think of the imbecility of these phrenologists?" They remind one of the little girl who was incredulous when told that she was

standing on the borders of two counties because she could see no difference of colour as on the maps. If these men would only read and take to heart the Fable of the Shield !

But Mr. Fawcett is waiting. Look at him, and say if, judging of him phrenologically, his head does not agree with his known character. Could that head be the head of an idiot ? Did you ever see an idiot with a head like that ? Could he, with such a head, be an ordinary common-place man ? and especially with such a physique as he has ? His body indicates a powerful man in every way. He is tall, weighs heavy, and is well filled out. He has a well-proportioned body and brain, and there is harmony in size between his face and head. All the features of his face are well marked and regular. His head is large, and well rounded out in every direction. The versatility of talent for which he is known is indicated in a most distinct degree by the round, full swell of the head in the region of the temples. He is equally at home in various departments of life and labour, and is able to probe a subject, and go far beyond mere surface ideas. He penetrates, like the true artist or mechanist, into the core of his subject, and gets hold of hidden truths, and brings to the surface unfamiliar thoughts, masters complicated subjects, and makes every part fit like a perfect machine.

It would appear as though all his powers of mind were wide awake, and as though he took everything into account, and made everything dovetail most perfectly together, every part fitting every other part, which could not be done without large Constructiveness joined to the adjoining organs. Order and Calculation are very large, as indicated by the size of the outer corner of the eyebrows. They give system, method, knowledge of numbers, and power to make up estimates, to calculate profit and loss, to arrange materials, facts, and knowledge, so as to make the most and best possible use of them. The side view of his head and face represents the frontal lobe very long and the intellectual lobe unusually large, the perceptive faculties especially so. Without the aid of his eyes he sees mentally everything in detail, and gets very correct ideas of things, their qualities and uses, and is equally well qualified to individualize different qualities of mind and their distinct action.

His very large perceptive faculties give a practical bearing to his intellect, and render him definite and precise in all his mental operations. His large brain aids him to grasp the whole subject, to take in the entire situation, and to master with equal ease and accuracy, either the general principles or

the details. He has the organisation to excel equally well in the exact or natural sciences. He has most accurate ideas of space, shapes, outlines, and distances, as well as of time and duration. Sense of sound, of melody, and harmony, is fully represented, and he is much annoyed by discord.

The central part of the forehead is very large, which gives him consciousness of actions, events, history, experiments, performances, and modes of doing things. It enables him to carry many things in his mind, and to bring his knowledge to bear in a definite and concentrated manner. He could



write a play embodying a great variety of character and action, or he could write a stirring novel. He fills everything with life and action, and is direct and to the point in all he says and does. The reasoning brain is absolutely large, though relatively not so large as the perceptive faculties. His mind works up from facts and details to high and comprehensive principles, rather than from abstract ideas to facts. He sees what is wanted first and then seeks the principle to be applied. He remembers facts as the foundation of his theories or philosophy, and is particularly good at analysing,

comparing, combining, criticising, and applying principles that are envolved. He is very quick to see the bearing of a principle and to take a hint, and is quite intuitive in discerning shades of difference in character and motives of action, in perceiving truths in nature, and in taking note of the signs of the times and of the movements of individuals and nations. He forms opinions with wonderful quickness and accuracy, and would have made a first-class judge in a criminal court, because of his superior memory, comparison, and intuition.

His full head around the ears indicates force and great executive power, industry, economy, and reticence when necessary. The height of the head indicates an elevated tone of mind, good moral principles, strong sympathies, a respectful regard for others, versatility and gentleness of manner, as well as a youthful, pliable, entertaining disposition.

Such an organisation as his indicates great capacity in a scientific, literary, mathematical, moral, and executive direction, and a man so endowed could hardly fail to make his mark, and fill a large place among his contemporaries, unless as a young man he had been utterly ruined by his bringing up and surroundings.

Professor Henry Fawcett, son of W. Fawcett, Esq., J.P., of Salisbury, born 1833, was educated at Trinity Hall, Cambridge, of which he was a scholar; graduated in high mathematical honours in 1856, and was elected a Fellow of the Society in the same year. Mr. Fawcett was totally deprived of his sight by an accident when out shooting in September, 1858. Having written and published "A Manual of Political Economy," the "Economic Position of the British Labourer," 1865, and having been an extensive contributor of articles on economic and political science, to various magazines and reviews, he was elected in 1863, Professor of Political Economy in the University of Cambridge.

Mr. Fawcett unsuccessfully contested, on Liberal principles, Southwark in 1857, the borough of Cambridge in 1862, and Brighton in February, 1864; was returned for the last-mentioned constituency at the general election in July, 1865, and was re-elected in 1868. He was unseated at Brighton at the general election of February, 1874, and was elected for Hackney in April of the same year. A new and revised edition of his "Manual of Political Economy" was published in 1869, with two new chapters on "National Education" and "The Poor Laws and their Influence on Pauperism," and another edition, with some additional chapters, was published in 1874. Mr. Fawcett has since published "Pauperism: its

Causes and Remedies" (1871), "Speeches on Some Current Political Questions" (1873), and "Free Trade and Protection" (1878).

Having been re-elected for Hackney at the general election of 1880, Mr. Fawcett accepted the post of Postmaster General in Mr. Gladstone's administration; a position the tenure of which he has already signalised by many useful reforms.

Professor Fawcett married Millicent, daughter of Newson Garrett, Esq., of Aldeburgh, Suffolk, on April 23rd, 1867. Mrs. Fawcett, who was born in 1847, published in 1869, "Essays on Political and Economical Subjects," and in 1874, Mrs. Fawcett published a little volume of "Tales in Political Economy." Mrs. Fawcett has taken an active part in advocating the extension of the Parliamentary Suffrage to those women who fulfil the qualifications of property and residence demanded of the male elector. L.N.F.

BRAIN AND MIND.*

Perhaps no living physiologist is better entitled to speak with authority upon the structure and functions of the brain than Dr. Luys. His researches into the anatomy of the nervous system are acknowledged to be the fullest and most systematic ever undertaken. He begins by treating the soft and delicate material of the brain-tissues with chromic acid, which hardens it so as to fix it sufficiently for the purposes of laboratory work, without altering or distorting its essential constitution. He then cuts off very thin slices of the tissue, one after another, and, by employing different re-agents for which the various minute elements of the brain have varying susceptibilities, he obtains transparent coloured sections of the nervous matter, which throw into strong relief the distinction between cells and fibres, besides clearly exhibiting the nature and direction of their intricate ramifications. In this manner he has systematically made many thousand delicate sections of brains, horizontally, vertically, and laterally, at distances of a millimetre from one another, each of which he photographs, till at last he has succeeded in producing a series of maps of its entire structure, which places the relations of its organs in strikingly novel lights. The first division of the volume before us is devoted to briefly summing up the main results of these important researches.

* "The Brain and its Functions." By J. Luys. Physician to the Hospice de la Salpêtrière. London: Kegan, Paul, French, & Co.

Confining his attention to the cerebral hemispheres alone, without entering into any particulars as to the cerebellum and other minor appendages, Dr. Luys begins by pointing out the fundamental distinction between the nerve-cell or real central organ and the nerve-fibre or connecting thread. The first answers to the telegraph office, the second to the wire uniting one office with another. The grey matter which forms the outer covering of the convolutions consists of closely packed cells, and is thus really the essential brain ; the white matter in the centre consists of fibres aggregated into bundles, and is thus really a mass of large nerves. Of the single cells themselves, with their numerous converging fibres, as well as of their arrangement in superimposed layers, Dr. Luys gives very graphic and instructive diagrams. The business of the cells individually and of the grey matter as a whole is to receive sensory messages from the external organs of the senses, and to transform or to co-ordinate their impulses into the proper movements—as, for example, when we see a fruit or flower, and stretch out our hands to pick it. The white substance is shown to consist of numerous interlacing fibres, having for their function the conveyance of such information from without inward, or the carrying down of such motor impulses from within outward. Their definite arrangement in regular lines between the two hemispheres, as well as between the surface of the convolutions and the optic thalami and corpus striatum, is admirably shown by diagrammatic figures. This is the most important result of all Dr. Luy's work. He has made it clear that sense-impressions travelling from the eyes, ears, or skin arrive first at the bodies known as the optic thalami ; that they are there reinforced and worked up, as it were, in special ganglia ; and that they are thence reflected to the surface of the hemispheres, where they are finally converted into appropriate movements. He has also fairly settled the fact that certain minor bodies within the optic thalami are closely connected with the main nerves of sight, smell, taste, and hearing respectively, and that they must be considered as subordinate or intermediate centres where the data supplied by those senses are put into shape for consideration on the surface of the brain. The normal course of an excitation in the sense organs seems to be this : it first proceeds along the fibres to its own subordinate centre in the thalami ; it then passes up to the corresponding portion of the convolutions ; it there for the first time affects consciousness ; and it is finally reflected back to the corpus striatum, whence it goes down the motor fibres to perform whatever actions have been decided upon for it by the conscious cells.

Dr. Luys supports his conclusions not only by his own anatomical researches, but also by many functional observations of various other physiologists, including of course Professor Ferrier's experiments. He has himself noticed, for example, that in persons who have had a limb amputated for many years certain disused portions of the brain become atrophied, these portions being presumably the motor centres for the amputated limb; and he has further observed that the atrophied region is not the same in the case of a lost leg as in that of a lost arm. Again, he quotes some very remarkable and delicate experiments of Schiff, who showed that in animals a slight increase in the temperature of some tract in the brain followed each kind of sensory impression: so that when a dog was made to hear a loud sound, the supposed auditory centre was heated; while touches, tastes, or smells produced similar heating in other portions of the convolutions. All this structural disquisition is full of interesting facts, many of which will probably be new even to professed students of nervous anatomy and physiology; while some of the observations are hitherto unpublished.

The second and larger part of the work is much less satisfactory. It deals with a most difficult subject—the correlation of mental acts or faculties with nervous functions—and ought to be distinguished by the very clearest treatment. It is, however, quite the opposite—hazy and indistinct in the extreme. It is difficult to get any definite idea of Dr. Luys's meaning. So far as we can make out, his views in this department do not appear to differ much from those which now generally obtain among physiologists, but they are set forth with much less clearness than in some of the works of English physiologists. His style is confused, involved, and terribly perplexing. He never gives one a single concrete image; all his treatment is abstract and unrealisable in the extreme. At times it is quite incomprehensible; at other times it is misleading, as when he talks about the "organic phosphorescence" of brain tissue as explaining memory. By phosphorescence he may mean a real or supposed power of retaining vibrations once impressed upon it; but most people with the "*Ohne phosphor kein gedanke*"* dictum in their minds, will naturally conclude that memory is in some inscrutable way dependent upon phosphorus. The language, too, is frequently next to incomprehensible, and not infrequently quite so. We are told, for instance, on one page that the process of judgment "embodies itself in the somatic translation of a voluntary excitation radiating from the

* Without phosphorus no thought.

psycho-intellectual regions," and on another that the convolutions, "when the perturbation from the external world, transformed by the metabolic action of the optic thalami, comes to reverberate within them, are perturbed in their turn, and are in a manner thrown into a condition of erethism, just as the peripheral plexuses were when first agitated by the external excitation." Possibly Dr. Luys or somebody else knows what this means ; but it is doubtful whether more than one in a thousand of his readers, if he gets so many, will follow him.

When dealing with the results of his experiments and investigations Dr. Luys is perfectly trustworthy ; but when he comes to treat of the mind, and endeavours to trace the marvellous variety of its manifestations to the simple action of the organs of sense, he is as unreliable as the metaphysicians of the old school. He contradicts in one page what he says in another, evidently without knowing it. Thus, while in one place he tells us that those who are "served by the best instruments" (*i.e.*, of sense) will "show themselves superior to others as regards the operations of the judgment, in the direct ratio of the superiority of their cerebral constitution"; in another place he states that it will depend upon "privileged regions" what "operations of the judgment are the best and most rapidly accomplished." In a word, while he makes it out that all the operations of the mind are reactions of the sensorial organs, he is obliged to have recourse to the theory of special mental faculties in order to explain the complex working of the mind. A man who would have us believe that conscience is an act of judgment, resulting from the action of the best instruments of sense, strikes us as being curiously incompetent to judge of things mental, when it is a fact of everyday experience that persons who show inferior judgment in intellectual matters, may yet be remarkable for their sense of right and duty, and *vice versa*.

PROFESSOR FLOWER states that the largest normal skull he has ever measured was as much as 2,075 cubic centimetres ; the smallest, 960 cubic centimetres, this belonging to one of those peculiar people in the centre of Ceylon who are now nearly extinct. The largest average capacity of any human head he has measured is that of a race of long flat-headed people on the West Coast of Africa. The Laplanders and Esquimaux, though a very small people, have very large skulls, the latter giving an average measurement of 1,546 ; the English skull of the lower grades shows 1,542 ; the Japanese, 1,486 ; Chinese, 1,424 ; modern Italian, 1,475 ; ancient Egyptian, 1,464 ; Hindoos, 1,306.

THE FACE AS INDICATIVE OF CHARACTER.

THE CHIN.

As a rule chins are not noticed as much as they should be. The nose, the mouth, the eyes, the ears even—all are noted and remarked on before the chin. And yet the chin is of the utmost importance in the *toute ensemble* of the face. It is more fixed and unchangeable than most of the other features, is less affected by education and culture, and may therefore be taken as representing some of the more fundamental and unchanging traits of character. It has already been shown* that in a symmetrically-developed face the chin should bear a certain proportion to the other regions of the face. When that proportion does not exist, the character stands on an unstable basis. It is wanting, in other words, in foundation.

It should here be noted that the bones of the face correspond in a mark-worthy manner to the form of the skull. The projection of the occiput corresponds to the projection of the alveolar processes and the teeth; so that the prominence of the posterior part of the brain may be predicated from the prominence of that part of the face. The breadth of the cerebellum corresponds to the breadth of the lower part of the face, that is, to the angle of the lower jaw; and the length of the cerebellum corresponds to the length of the lower jaw, measured from the tip of the chin to the angle. The breadth of the skull, immediately above the ears, that is, of the part where the phrenologist locates the organ of Destructiveness, corresponds to the breadth of the face over the malar bones, or the prominence of the cheeks. From the cheek-bones arises the greater portion of one of the most important muscles, the masseter, which is inserted into the angle of the jaw. Thus the inferior maxillary comes directly under the influence of the cerebellum and of that part of the cerebrum which is largely, if not chiefly, concerned in the development of resolution; and we shall see that its physiognomical value is as an index of the function of the cerebellum and of the central basilar portion of the cerebrum.

The anterior and lateral development of the jaw indicate respectively the permanence and the intensity of Amativeness, its downward development the power of Will or Determination. To speak first of Amativeness or love: it will be found that the most prolific races of men have a prominent development of chin as well as of the cerebellum. Take, for example, the

* See the PHRENOLOGICAL MAGAZINE for 1880.

Irish, the Scottish, the Germans, the English, and the Russians. On the other hand, the Malays, the Hindoos, the Chinese, and other Eastern peoples, have much smaller chins and cerebellums, and are much less prolific. The North American Indians are another instance in point. They are noted for their small cerebellums and retreating chins (Fig. 75), and they form an equally notable example of the inferior development of the amative faculty. Love is not a striking manifestation of character in either sex, and Mr. Catlin, who dwelt among them and

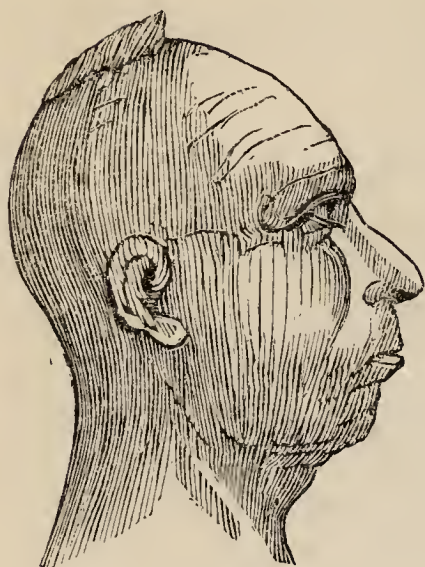


Fig. 75.

studied their habits and customs for many years, tells us that a family among them rarely comprises more than two or three children. Natural-born idiots, too, have little or no chin (Fig. 76), and they are generally equally deficient in the region of the cerebellum and in its characteristic function. It does not follow because a chin shows a deficiency of the faculty of love, that there is also a lack of will-power, although, as in the idiot, the two often go together. But of this we shall speak further on.



Fig. 76.

As there are different kinds of love, so there are various signs of love. Out of the primary function of Amativeness spring the various social and domestic affections, and on those affections are based the conjugal, filial, and other social relations. The chin indicates these different kinds or degrees of love, and is therefore almost endless in form and in significance. Broadly speaking, the chin may be divided into—

The Anteriorly Pointed Chin,	The Broad Square Chin,
The Indented Chin,	and
The Narrow Square Chin,	The Broad Round Chin.

The first named is indicated by the anterior projection of the inferior maxillary bone under the first incisor teeth, as shown in the accompanying face (Fig. 77), and denotes the faculty of Congeniality, or the love of one exactly adapted to one's self. The sign and the faculty are more frequently met with in women than in men. It is difficult for a person so endowed to find a congenial partner, and is therefore

frequently the cause of "single-blessedness." The sign often gives a very pretty, but rather weak expression to the face, especially in a man.

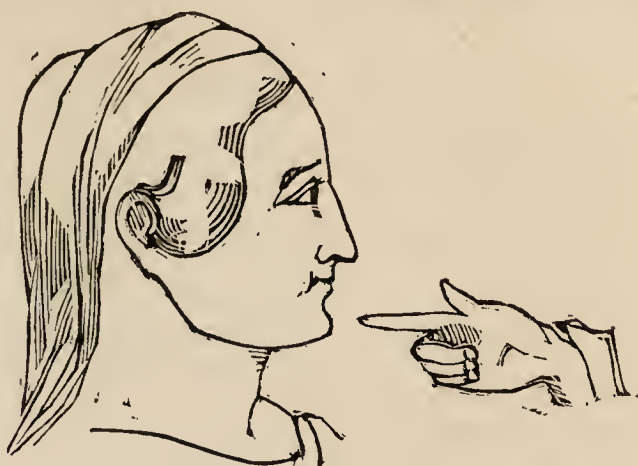


Fig. 77.

The anterior projection of the chin, next to the sign of Congeniality, betokens the faculty of Desire to be Loved. This is more common in man than in woman, and when large causes an indentation in the centre (Fig. 78).



Fig. 78.

The indented chin gives by itself a feminine appearance to the chin and to the rest of the features. It is somewhat out of character in the female face, and if not counteracted by other faculties, betrays the coquette. Even in a man it is not an admirable sign, unless accompanied by other balancing qualities, as it gives a lightly-come and lightly-go disposition.

The prominence of the inferior maxillary bone, next to the sign of Desire to be Loved, and under the second incisor teeth (Fig. 79), indicates the faculty of Desire to Love. This forms the Narrow Square Chin, which is generally larger in woman than in man. Indeed, the true womanly expression of face depends very greatly on the faculty of which this is the sign. One who has this sign large wishes to gratify the desire to be loved in the other sex, and is inclined to bestow love on those who from circumstances, lack of wealth, personal charms, or what not, are not so likely to call forth love as others. Women so constituted frequently bestow their affec-



Fig. 79.



Fig. 80:

tions upon some humble individual in preference to one more nearly equal in birth and fortune. The faculty of Desire to Love, together with that of Congeniality, forms a very beautiful combination in woman, disposing her as a wife to cling very closely to the husband of her choice and to gratify in him the man's natural desire to be loved.

The Broad Square Chin is shown in the breadth of the fore part of the chin, laterally of the sign of Desire to Love, and under the canine teeth (Fig. 80), and denotes the propensity

of Ardent Love. This sign belongs to the manly face, as the Narrow Square Chin belongs to the womanly face. This faculty of love has the character of earnest devotion, and when very strong, and unaccompanied by great strength of intellect, manifests itself in love-sickness, desperation, and even insanity. It is relatively stronger in man than in woman, his love having generally most of earnestness and ardency,



Fig. 81.

and leading most frequently to disordered health and derangement of reason.

The signs of the preceding faculties occupy the chin proper. We now come to those lying along the lower jaw. The breadth of the jaw under the molar teeth, and next to the sign of Ardent Love, forms the Broad Round Chin, and denotes the faculty of Faithful Love or Constancy. This sign, together with that of Ardent Love, gives a roundness to the contour of the jaws (Figs. 81 and 82), and a devoted expression, and is more frequently than otherwise accompanied by a sanguine temperament. Constancy is generally larger in woman than in man. Those with this faculty large are less liable than others to be drawn away from their wedded partners, or from those to



Fig. 82.

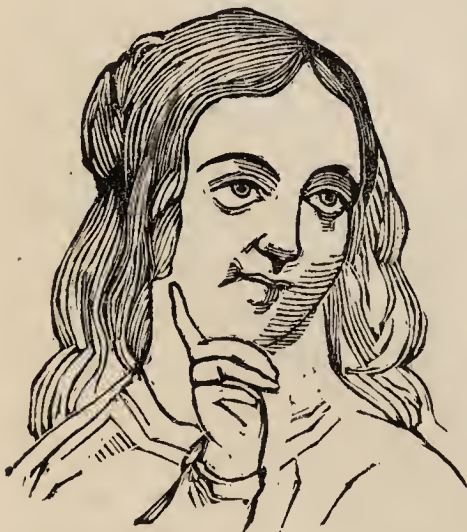


Fig. 83.

whom they are engaged, by new objects of attraction. In wedlock they desire to have children, both as tokens of love and bonds of union. The faculty manifests itself mainly in embracing and kissing, and is indicated not only by the breadth of this part of the chin, but by the breadth and fulness of the red part of the lips.

The breadth of the middle part of the lower jaw indicates Love of Physical Beauty. It is shown very large in the portraits of Henry the Eighth.

This faculty, unless held in great restraint, is liable to lead to wantonness and sensuality, and an idolatry of the merely physical. In its legitimate action it prompts to innocent

fondling and caressing, and in looks of love that express the gratification of the eyes in beholding the object beloved. In woman it gives a doting fondness for the object loved (Fig. 83).

There is one more amative sign in the lower jaw which it is necessary to notice, and that is Insane Love. It has its sign beyond the Love of Physical Beauty, at the broadest part of the inferior maxillary, almost immediately below the cheek bones. It is rarely found in women, but not unfrequently in men. When a person is very broad at that part, especially if the sign be accompanied by redness, there is a dangerous development of the amative propensity, one which too often leads to criminal excesses and even insanity. A woman of a delicate and susceptible nature had better have the companionship of a millstone at the bottom of a well than that of such a man. The sign is very common among criminals.

LECTURES ON PHRENOLOGY.

BY DR. SPURZHEIM.

LECTURE X.

Among the powers which I call affective there remain yet two to be considered ; one of them is commonly called, in England,

WIT.

If you ask, what is wit? it is difficult to give a definition, though everyone feels what it is. I formerly reckoned this manifestation of the mind among the intellectual powers, and I cannot think a man can be witty without intentions ; but the great object of phrenology is to ascertain whether, what in England you call wit, and what the Germans call *witz*, and for which the French have no proper term (they call it *bel esprit*), is a fundamental power of the mind. I have just now to mention that I cannot conceive any true wit without intellect, but we see some individuals in whom this power is manifested without much intellect ; we see witty conceptions in their acts without reasoning, and there are children fond of playing with each other to amuse, and fond of being funny, as it is said. If I begin with the observations made by phrenologists on the configuration of witty persons, I think that will be a good way. Here is the head of a witty person, a man famed for his wit, Sterne ; in all his conceptions he was peculiar ; we find that his head is broad here. We find that there

are some poets who have witty conceptions, and they are broad here laterally. If I see a fulness here above the external angle of the eye, anterior to Ideality, then I conclude that the person has wit. Some individuals have this power so strong that nothing goes through their brains without receiving a tinge from it. Now this is an individual (Voltaire) who could not contemplate any subject, not even a holy subject, without giving it a peculiar tinge of this feeling, and you see the head is broad here. There are some individuals who, in their countenances, show what is called wit, such as comedians ; Garrick, for example ; everyone laughed as soon as he appeared, and we find the organ largely developed in his head. There are other good humoured persons as we call them ; they tell a story, and everyone is amused ; but the same story



Wit or Mirthfulness large.

told by another would excite no attention, and you will find in the former this organ large. We give here a peculiar sort of mental operation, which we call wit or good humour, and we find the organisation full in the anterior and lateral part of the head.

There are other persons again who like to tell stories, but always with a kind of mockery, and they say things with a feeling of irony, have a sarcastic way of speaking of anything, and if they are offended with any individual they give a sharp reply when asked a question ; if you look at such, they are broad here. Now if I were to speak of a particular application of this power, I should be obliged to speak of a combination of all the powers, and if you learn the combinations you will find why persons who tell stories succeed in amusing, and

why some persons give a sharp, cutting reply, and why others give a tart answer, but not so severe as the others. Now, if a person have Destructiveness large, and Conscientiousness small, with this of Wit large, that individual will be very severe ; but a man having combined with wit Self-esteem large, would not be so severe in his replies as the person I have first mentioned. There are men in society who give perhaps witty, but unguarded answers, and they give offence. Some, being offended, will go away and say nothing, while others will say at once what they feel. Here is the cast of an Esquimaux's head ; he was a very funny being, and you see the organ is large in him.

If you come to artists, there are some who prefer caricaturing to anything else, and some, if they try to make a caricature, could never succeed ; now these artists who succeed best in caricaturing are full here, and I am sure this was the case with Hogarth. I have a cast here of a young boy, who had a great talent, constructiveness for cutting out animals, but he always preferred to give the animals such attitudes and positions as would make people laugh. In all countries you will find persons who have early in life shown this power strong. Here is the cast of the head of an Irish boy, eight years of age, and this part is largely developed. We see, even among musicians, that there are certain composers who produce peculiar kinds of music, witty, striking music, so to speak. In architecture we find certain persons fond of whimsical constructions, and so we shall find that no single power gives great talents ; if it did, talents would not be so scarce, but a great number of talents are necessary in order to arrive at great perfection in any science.

How seldom does an artist exhibit great accuracy of colouring and of form ! He may colour well, but his forms are bad, there is no proportion between them. I said in my last lecture that there is a certain power necessary to all parts, there must be a certain inspiration in their conceptions, but the other powers give the modifications to their productions. It is the same in music,—a power is necessary to make a musician ; but some are philosophical in their compositions, whilst others are quite superficial ; some are quite witty in their conceptions, and introduce chords which are quite amusing. I have been told by an intimate friend of Joseph Haydn, that when he saw, at the performance of a piece of music, his audience inattentive, and some perhaps quite asleep, he would introduce some dreadfully discordant sounds to rouse them, to bring them to their senses, and then go on with the piece as before. So that in common life, among artists and

others, in the liberal sciences, in the higher conceptions, the power is manifested in different degrees, and is called, in the highest degree, wit.

But what is the fundamental power of the mind, the manifestation of which we call wit? It appears to me that there is a feeling given to man of this kind, but I do not consider it as an intellectual feeling, although it may be combined with the intellectual feelings, and receive names accordingly. We must first have clear ideas of the primitive powers, and if we have not, we can never express ourselves clearly. Hitherto the knowledge of the mind has been vague, and principally on this account names have been attached by philosophers, not to the primitive powers, but to their applications. It is that faculty which the English call *wit*, which the Germans call *witz*, and the French *bel esprit*, and I am sure that this power is not in such combination in this country as it is in France; the sense, however, remains the same; it is the wish to amuse others, but the application will be modified according to the combination of the other powers. If you find a person who, like this man, Voltaire, ridicules so many things considered sacred by others, you may be sure that Veneration is not much developed with this power.

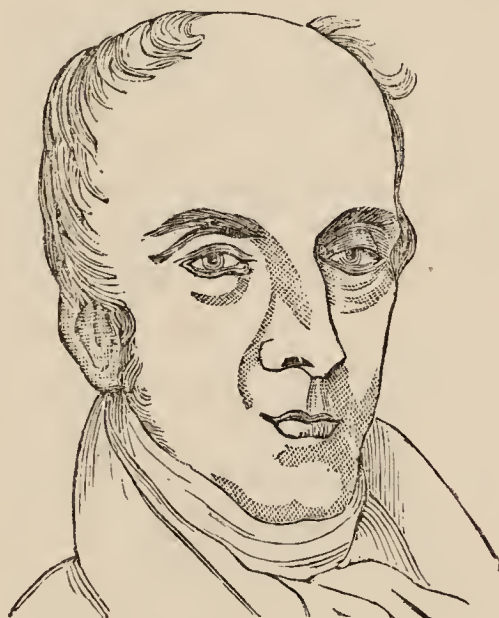
Is wit a combination of the intellect with the lower feelings? Shall we call it genius? Genius is supposed to exist only in superior intellects, and if to speak of things around us in a merry way be genius, then idiots have genius; for some idiots who have this power strong, and hope strong, speak of all things about them as if they were heavenly. It is fundamentally a wish to amuse, and it will vary in its application according to the activity of its combination with other powers.

IMITATION.

We see that some persons have a great talent at imitating others, and this art is particularly exhibited in children; if they observe anything going on, or hear anything, they try immediately to imitate it. There are adults who are particularly inclined to take off others, as it is termed; whatever they see done they like to imitate. There is a peculiar talent then for imitation, and we see this power more active in children than in adults. Some philosophers have said, that man learns everything by imitation; but that is not the case. We see this power very strong in some adults, and it is a power essential to great actors—to those who excel in dramatic representations; and we find that it is differently exercised even among those persons. There are comedians and tragedians,—some who excel in the imitation of the softer

feelings, and others who excel in imitation of the stronger feelings ; some excel in the representation of imperial characters, others in the representation of mild characters,—that, however, is not conferred by this power.

Many men, who are good actors, have great power of imitation, but they could not invent a character ; one power is sufficient to imitate, but to perform a deep character many are requisite. The character can only be well represented by him who possesses the feelings which that character is supposed to feel, because these feelings influence the whole expression, the whole appearance, and when I come to speak hereafter of the natural language, I shall describe this more fully. We see that in the arts imitation is very useful, but we find that some men who can copy very well cannot invent anything ; if they try to represent a figure in a painting, they



Imitation large.

may give it a correct form, but a person who looked at it would say it is stiff, there is no expression in it. If you look at a statue well executed, you would say, there is life in the statue, you may almost fancy it about to speak, and those who excel in giving expression to the various productions of art, have the power I speak of.

Now it would be impossible to guess at the situation of organs, but experience shows that the organ of Imitation is situated here, at the upper part of Wit, by the side of Benevolence, and whenever you see the organisation full here, you may be sure that the person has the faculty of imitation. There is in this skull, said to be Raphael's, the organ of Imitation very large ; it has Constructiveness large also, and it has form and expression : it combines, indeed, all the qualifications necessary for a great painter. I have mentioned

before, that there are several individuals who doubt whether this is the true skull of Raphael, but I know that you might look at thousands of skulls before you would find the manifestations of all the talents which have been shown by Raphael, and that would, therefore, be to me a great proof that it is the true skull, judging from the combination of the powers which it exhibits. I have seen many skulls in the catacombs, and other places, but never saw any one that would do for Raphael so well as this. The organisation is quite ascertained, and in practical life you will find that those persons who excel in imitation, whether in the arts or in common life, have this cerebral part large.

These are the feelings which I call *affective*, because the affections depend upon them, and it is important to recollect that they exist from within. There is a new series of powers to be considered, and you know that the ancient axiom of Aristotle, brought into more general repute since the time of Locke, that "there is no power of the mind which has not been derived from the external senses"; but if every mental operation is derived from without, then we could instruct our animals, because they have the external senses as perfectly as ourselves, and hence an interesting source of intellectual activity would be discovered. But what we have affirmed hitherto as being affective in the mind are the feelings, the propensities, and the sentiments, and all these have their source from within, and they act against our will—are not under his control. You cannot say that I shall have this feeling or that feeling, you cannot say, after dinner, "I will be hungry." The feelings are all blind, they act more or less, but only as impulses without judgment, and every one of them acting by itself would produce disorders. Imitation acting alone would make a man a buffoon; caution would make a man fear his own shadow; and benevolence, veneration, self-esteem, or the love of approbation, acting alone, as I have before shown, would produce abuses.

There is a remark which I have to make, and which you must keep in view, that by far the greater part of the cerebral mass is given to the feelings. We have examined all the posterior and lateral parts of the head, and the superior part of the head, and we have arrived only as far as the feelings. Which is more active in man, the feelings or the understanding? I would ask whether we act by the feelings or by the intellect? If you appeal to your own consciences you will say that the actions which you do with respect to other beings, and even to the Supreme Being, you do by the feelings; the first impulse is given by feeling. If you would pay attention you would

find that by far the greatest portion of the cerebral mass is that which is given to man in common with animals ; and the other part, by far the smallest, is allotted to the feelings proper to man. I would ask you whether you do not find this to be so ? Hence arises the great necessity of education to exercise the higher faculties, to give them an ascendancy over the feelings.

The results of our inquiries thus far are these : first, That the brain is necessary to the manifestation of the feelings ; and it is astonishing how anyone can doubt that proposition. I am sure that those who object to it have never looked to nature. Secondly, We conclude that it is necessary to the manifestations of the mind ; that it is the organ of the feelings and of the understanding. There are some philosophers who do not like to acknowledge that the brain is necessary to the manifestations of the feelings, although it is much more easy to show that than it is that the brain is necessary to the intellect. Would you say that because a blunder has been made in phrenology there is no phrenology ? Yet there are those who have made blunders in phrenology, and still do so.

I come now to the forehead, and to consider the intellectual operations.

It is necessary to divide it into smaller portions than we have done the other parts of the head, and, therefore, mistakes become more easy here, than in showing the seats of the inferior feelings. When you reflect for yourself you will be convinced that it is much easier to show that the brain is necessary for the feeling than for the intellect, and yet everyone admits that it is necessary for the intellect. We want understanding : well, we admit there is understanding in nature, and that as the Creator has given us feelings, He has also given us other powers, which we call intellectual, in order to distinguish them,—powers by which we are enabled to acquire a knowledge of the external world, and of the physical qualities of the objects around us. The feelings are not under the control of the judgment ; we may have an inclination to eat, and nourishment may be placed in the room, but the presence of the food is not the cause of our being hungry ; to be able to take food there must be an appetite for the food. The feelings have not an object for their satisfaction, they merely wish to be satisfied, and then comes the intellectual power to act, to point out in what way they may be satisfied, and this is the cause why they have been confounded, their actions being simultaneous.

In speaking of the intellect, we must examine the external senses ; certainly they are necessary as intermedia between

the mind and the external world. The mind cannot act upon external objects except by instruments, and the senses are necessary to that communication. There is activity in the mind without the senses; but I will not anticipate that. I would ask, however, do we acquire a knowledge of the world by the senses alone? It is said that man acquires the knowledge of the world by the five senses: Is this true? If we go to animals, we see that many of them have some of the senses more perfect even than man. An eagle sees, from the immense distance at which it is poised, the hare sitting in the grass; the turkey sees a bird of prey when man cannot, and gives signs to her young ones to hide themselves. Examine the other senses of hearing, smelling, and you will find that they are even more perfect than those of man; yet animals never acquire that knowledge of the world that we acquire.

To consider man only; do you think you can acquire the powers in proportion to the activity of your senses? Ask an artist, who has great facility in distinguishing colours, if he could acquire from that a talent to paint, and I am sure he would say no, there is a peculiar instinct for that; but it is sufficient for us to know that there is a something internal necessary. An idiot has the external senses as perfect as another man, but has he ideas from them? There is an excellent refutation to such a doctrine afforded by the person of James Mitchell, of Scotland. I dare say many of you know his history. He was born perfectly blind and deaf, and consequently dumb; he has arrived at the age of twenty-one years without any education, and yet he has shown from infancy an activity of mind. He has shown the existence of caution, of self-esteem, of benevolence toward his family, and it is really astonishing how this young man arrived at the possession of the individual feelings; to receive them from without was impossible, he was cut off from any communication with external objects. Yet he had self-esteem, and acquisitiveness, and other feelings he thought it necessary, under certain circumstances, that he should conceal; he was allowed to smoke four pipes of tobacco in the day, and if any persons came and gave him tobacco, he would conceal it until he had received from his friends his regular allowance. He was fond of having new clothes, and would destroy his old ones. He manifested a great desire to become acquainted with the external world, and wished to obtain a knowledge of the things around him, and certainly this was very peculiar. He had a good organisation, and the fundamental powers were evident, so that we must admit that to acquire knowledge the external senses are not sufficient.

I wish to call your attention to three points : First, That the external senses are not sufficient to explain the intellectual operations of the mind.

Secondly, That every external sense has its power perfect in itself, and is not, as to its power, dependent on another. I am sure that each of you has heard of the rectification of the senses, namely, that we learn to see perfectly by touching, and that without touching we could not see, and so on ; but every sense has its own power. We do not taste, because we can hear ; nor see, because we can touch. A person might ask, when he plunges a stick into the water, Is it straight, or is it crooked ? It appears crooked, but when it is taken out it appears straight, so that it is the same afterwards as before, and before as after. This doctrine appears to have been adopted from observing that children, soon after birth, show a great wish to handle everything they see, and appear then better satisfied ; but the truth is, that children are born with the organs of vision imperfect, and as soon as the eye becomes perfectly adapted to the medium in which it is placed, sight is perfect also. However, we must admit one modification of what is called rectification, each sense can acquire that knowledge of the world which the others cannot. Hence, when a stick is plunged into water, we see it crooked, we touch it, and our knowledge is rectified, but not the senses. Can the sight rectify the touch, or the touch the sight ? If you place a bit of sticking plaster upon the finger of an individual, so as to take away the sensation from the finger, will that enable him to see better ? By the action of each sense our knowledge is corrected, but not the senses themselves.

Thirdly, That as the powers of the external senses are very limited, so our notions derived from them would be few. I will give you an explanation of what I mean : suppose we say that the mind acquires knowledge by the external senses, but the knowledge acquired merely by the senses is very limited ; the greater number of notions we have of the world requires some intellectual operation ; hence the necessity of some cerebral parts besides those assigned to the senses. The knowledge we have of individual beings around us, of the physical qualities of the objects—such as their form, size, colour, number, motion, not only, indeed, of their qualities, but also of their relations—has been ascribed to the external senses, but the external senses alone cannot explain this knowledge.

That part of the brain situated in what is called the forehead has something to do with acquiring a knowledge of external objects, and in making us acquainted with their qualities and relations. The first thing is to examine the

forehead in general, and I cannot call your attention enough to this part, if you take any interest in the intellect of man. You must make this a particular branch of study ; difficulties above difficulties are here. I wish first to call your attention to the different sizes of foreheads.

In the scale of beings, we remark that the cerebral parts above the nose increase in size in proportion as animals advance towards the organisation of man, and we infer that the intellectual powers have the forehead assigned to them. Look at the wolf, and if you remove the olfactory apparatus you will find that there is no forehead left, and in the fox you will find little more than in the wolf ; but in the more intelligent dogs you will find more than in the wolf or fox ; and in proportion as animals exhibit higher degrees of sagacity, or what we call in them instinct, we find the anterior lobes of the brain more developed. But to come to man, draw a comparison between those who have exhibited the strongest intellects, with others who have manifested very little, and you will see the greatest differences, and such differences as must lead you to acknowledge the need of the forehead to the display of intellect.

Here is the skull of a man twenty-one years of age, with very little brains in it ; now if man is to learn everything from without, and if the anterior part of the brain more especially be not necessary for the possession of intellect, make such a man become a Bacon or a Newton. It may be said that education makes the difference, but although we admit the influence of education as a kind of moral culture, yet if the seed be not in the ground we can expect no harvest. Here is the cast of a man who lived at Amsterdam, he was twenty-five years old when he died, and he was a complete idiot ; now what could you make of such a forehead ? (Showing it to the audience, the head being very small.) If the various tribes of mankind spread over the surface of the globe were examined, great differences would be found in the intellectual powers, and differences equally great would be found in the size of their foreheads. There are some persons who say that there are several species of mankind ; but such an opinion is erroneous, for all the characteristics by which animals are separable into species are to be found in every man, so that there is only one species, although there are varieties. An African is inferior in intellect to a European, and one European is inferior to another. But among ourselves, even in the company before me, there are great varieties in the shape of the forehead, and so different are the foreheads of individuals, that I am sure you might as readily distinguish persons by

their foreheads as you do now by attending to their faces, or eyes, or noses.

Everyone may have a talent even with a small forehead ; he may have, I say, a talent ; but see whether an individual with a small forehead has ever exhibited great comprehensiveness of mind, whether he has shown great powers as a metaphysician, a mathematician, a poet, or a painter ; you may rely on it that such a man has a forehead large. Everyone may make himself a useful member of society even with a few powers ; but where you find a person who excels in everything he undertakes, and understands everything, you may depend upon it that his forehead is large. The ancient artists have given foreheads to the gladiators quite different to such as they have given their great men, such as Demosthenes, Socrates, Pythagoras, and Hippocrates, and to the divinities they gave enormous heads, as we see of Jupiter and others ; but these are all exaggerated representations.

In my next lecture we shall come more to particulars, and shall begin with the powers situated in the anterior parts of the brain.

EDUCATION.

[SECOND ARTICLE.]

In a previous article I have shown *how* we are educated, and that the process is life-long. Education, then, is with each of us an important matter. Shall we leave it to chance, or shall we endeavour to have some hand ourselves in the work ? Every sensible person must prefer the latter alternative. Suppose, then, that we wish to attain to as complete an education as possible ; that is, we wish to make our minds instruments as perfect as it is possible for us to make them ; how shall we set about this task ? Are there not some general rules, some leading principles to guide us ? Certainly there are ; and some of these I will now endeavour to set before you.

The first, and perhaps the most important principle to be borne in mind is this : *Always make the best possible use of your actual intellectual powers.* Do not let your mind use its energies in a careless, shiftless way ; but on every occasion exert your faculties to their utmost. The mind is an instrument which improves by the careful exercise of its powers, but degenerates under a negligent exertion of them. What I mean is this : whenever you have to employ your intellectual powers, as, for instance, in deciding between two alternative

lines of conduct, do not form your judgment hastily or negligently, but reflect upon the matter well, weigh each *pro* and *con* thoroughly, and endeavour, with all your might, to arrive at a correct judgment, perfectly free from all bias and prejudice of any kind. Each mental act of this kind will add to your powers ; while each carelessly formed notion or opinion enfeebles and stultifies them.

Another principle that I would propose for your consideration is this : *Always keep your mind well employed, either in obtaining useful knowledge, or in reflecting upon that which you have acquired.* It is not so much the learning of facts that promotes mental culture, as the reflecting upon and classifying these facts, comparing them one with another, and so making them food, as it were, for the mind. Nevertheless, the facts must be learned before the mind can reflect upon them, just as food must be eaten before it can be digested. And, therefore, have your eyes and ears always open, and all your senses on the alert ; for the senses are the channels, by which knowledge flows to the mind. Some people appear to go through the world with their eyes shut, never learning anything worth speaking of ; others seem only to open their eyes to gaze at that which is not worth looking at. Yet this world, which God has made, is full of beautiful and wonderful things ; and we may be sure that the Creator never placed all these things right before our eyes without intending that we should see them, and reflect upon them, and behold His glory in them. Everything in Nature is wondrous and sublime, like God Himself. The daily march of the majestic sun, the nightly array of the star-spangled sky, the sunshine and the storm, the rock and the waterfall, the flower of the field and the babbling stream, are all constantly teaching the mind truly desirous of instruction. This was the conviction of the greatest of poets,—a man who was, in a pre-eminent degree, a student of Nature, when he penned those lines which cannot well be quoted too often :—

“ And this our life, exempt from public haunt,
Finds tongues in trees, books in the running brooks,
Sermons in stones, and good in everything.”

A third important principle to be borne in mind is this : *Whatever you study endeavour to learn it accurately.* Never be satisfied with a surface knowledge of anything ; but whatever you do seek to know, learn fully and accurately. Some people are great talkers, but poor thinkers. Their information is often little better than that of a parrot. Do not be one of this class. Try to understand things clearly and fully. To do this is more a habit than anything else, and can be acquired,

like every other habit, by trying to acquire it. We obtain a distinct notion of a thing by looking it well in the face, so to speak, thus getting a clear image of it upon the brain, and then reflecting upon it carefully and thoroughly, turning it over and over in the mind, and looking at it from different points of view. Such a habit is indispensable to anyone who aims at excellence.

There is no better way of acquiring this habit of accuracy than by the study of some subject which requires it. Such a study is that of mathematics, especially pure mathematics, such as is contained, for instance, in Euclid's Elements. For myself, I cannot conceive any study that can surpass this in producing accuracy of thought; yet, after all, we must remember that we can acquire this habit, as well as any other, by simply *trying* to acquire it, whatever be the subject of our studies.

Another important principle closely connected with the preceding one, and indeed only a corollary to it, is, *that we should always strive to express ourselves clearly and accurately*. The philosopher Socrates is represented by Plato as insisting upon this point, in that last marvellous scene, just before his death.* “Be assured, O Crito,” he said, “that the habit of speaking inaccurately is not only a mistake with reference to this particular point, but that it also does some injury to our souls.”

The habit of speaking grammatically is easily acquired, if we are really anxious to acquire it. Observe others, and you will soon learn to discriminate between those who speak correctly, and those who do not. Observe also yourself, and you easily find out the faults you are in the habit of committing. Such a method will soon make you at least a grammatical speaker; and this is the first and most important step in learning to express yourself clearly and accurately. The next point is to endeavour to make your words express exactly your thoughts. Avoid learned words, unless they are necessary. The best speakers use the simplest language, and this is always the most effective. You would think, from the speech of some people, that they were constantly searching through their dictionaries for high-sounding words, and then seeking every opportunity of using them. These are not men of culture, you may be quite sure, and therefore do not imitate them. Always use the simplest words that express your meaning. The best works in the English language, the noblest thoughts, the truest poetry, are expressed in such language.

* εὖ γὰρ ἴσθαι ἥ δ' ὅς, ὃ ἄριστε Κρίτων, τὸ μὴ καλῶς λέγειν οὐ μόνον εἰς αὐτὸ τοῦτο πλῆγμελές, ἀλλὰ καὶ κακὸν τι ἐμποιοῖ τῆς ψυχῆς.—*Plato Phædo*.

A great aid in acquiring accuracy both of thought and language, as well as greater breadth of intellect, is the study of some other language than our own. Apart from the many other advantages to be reaped from such a study, as a means of mental culture alone, it is invaluable. As a means of education perhaps the study of the Latin tongue is the most useful. From the study of its grammatical structure alone one cannot but have a much clearer perception of the principles of Grammar in general. The language is built up so methodically, its periods are so exactly balanced, and their construction is so thoroughly and distinctly logical, that the mind cannot but greatly benefit by its study.

One more principle, that I would recommend my readers to adopt, is this:—*Despise no kind of information, but seek to learn and improve your mind from all sources of knowledge that you may meet with.* We often hear it said, that it is better to know one subject thoroughly than to have a mere smattering of many. This is perfectly true, and should always be borne in mind. Those who now begin this study, and then turn to that, never overcoming the principles of any, do themselves rather harm than good. It is the *mastering* of difficulties that fortifies the mind—not the habit of now dipping into this subject, now into that. But, nevertheless, while bearing this in mind, and giving our more serious labour to studies that we have definitely undertaken, we should take every opportunity of adding to our stock of knowledge, and not disdain any information that is thrown in our way, however much apparently out of our line. You may say that science is infinite, that its branches are so numerous, that no man can expect to obtain anything like a complete mastery over them all, or even over the greater number of them; would it not be better to undertake the study of one or two branches, and entirely neglect the rest? Certainly not; for with a comparatively small amount of labour, we may, at any rate, learn the leading principles of each of the more prominent branches of knowledge; and, by so doing, we shall have in our minds a foundation upon which to place any facts that are thrown in our way. For example, without intending to make a serious study of astronomy, we may easily master the principle of gravitation, and some of the leading facts and hypotheses of the science. We may not have the time or the inclination to go more deeply into the subject; yet, with these main facts and principles in our minds, we can enter into a profitable conversation upon the subject with one more learned in it than ourselves, whom accident may have thrown in our way, and so add both to our pleasure and our instruction. Similarly,

it is not difficult to master the chief facts upon which the science of geology is based ; a few hours' reading will do this for us ; and then, whether we are walking past a quarry or a railway cutting, or spending an hour in a museum, or conversing with a geological friend, we shall be able, pleasantly, and without effort, to add to our stock of knowledge. I would, therefore, urge all who are desirous of self-improvement to try gradually to make themselves acquainted with the leading principles of all the main branches of science ; for by so doing, they will be opening, as it were, doors through which, not only amusement, but stores of real, sterling knowledge will continually flow into their minds without effort or exertion on their part.

And now consider what sources of happiness they, who act upon these principles, open out to themselves. Instead of finding every leisure hour a weariness, they possess endless resources of interest and pleasure. Whether they stay at home or take a walk, they find an infinite variety of objects which occupy and instruct their minds, and free them, at the same time, from the many temptations that assail the vacant mind.

"These," to use the words of Cicero, "are pursuits which invigorate our youth, and entertain our old age ; they are an ornament in prosperity—a refuge and a consolation in adversity ; at home they are a source of delight, while abroad they are no hindrance ; they are with us in the wakeful hours of the night ; and, whether we travel abroad, or seek the repose of a country life, they are our constant companions."*

J. A. S.

Thou'rt like a fair sweet flower
 Found in the woods alone,
 Fed by the light and breezes
 Where other flower is none.
 Thine eyes are like a heaven,
 And shed a cheerful ray
 That drives all gloom and sadness
 Out of the heart away.
 I fain would rest for ever
 Within their glow and gleam,
 For away my heart seems only
 Tossed in a weary dream.

* "Haec studia adolescentiam alunt, senectutem oblectant, secundas res ornant, adversis perfugium ac solatium praebent, delectant domi, nec impediunt foris, pernoctant nobiscum, peregrinantur rusticantur."—*Pro Archia Poeta* vii., 16.

WHY THE YOUNG CHILD HAS NOT THE POWER OF SPEECH.

(*From Dr. Fr. Schultze's "Die Sprache des Kindes."*)

The Romans called the nursling *infans*, a being that does not speak. Why has not the child, as such, the power of speech? This question seems to be superfluous, even foolish. And yet, considering that it may be answered differently, according to the different metaphysical points of view; that Plato would solve it altogether differently from a Locke or a Darwin, that just here—since nothing but the acquisition of articulated speech makes man a man—all the mooted points of anthropology, psychology, and philosophy in general meet; considering, further, that if children were born with a complete speech, this would presuppose an order of things absolutely at variance with that which exists, so that the speech development of the child, such as it is, allows an illustrative and demonstrative conclusion backwards, as no other manifestation does: the question will lose every appearance of triviality, and will prove, in the highest degree, to be of deep thought and moment. It is, however, not our intention to fathom all these depths of philosophy; we answer this question, at present, simply by saying: the child cannot speak, because it is not sufficiently developed either bodily or mentally. Our duty now is to expand this proposition into its different factors.

As regards the bodily development, to begin with, it is of course necessary that the bodily apparatus for speaking be developed so much that the many sounds of speech may be emitted from it, just as harmonious sounds may be produced from a perfect musical instrument. The child's instrument of speech, however, is lacking in a great number of chords, pipes, and registers. The organs of speech are: the lungs, the windpipe, the larynx with the vocal chords, the mouth with the tongue, the palate, the teeth, and the lips. This whole apparatus we may compare to an organ, in which the bellows are represented by the lungs and the windpipe, the pipes by the larynx, and the tube by the mouth. The lungs expel the stream of air, the timbre (clangtint) and the laryngeal sounds are formed in the larynx; as the vocal chords open or approach, the deeper and higher tone originates. The fact that the tone takes just that shape which we know and call individually the vowel *a* or *o*, &c., and the consonant *b* or *f*, &c.,

is owing to the tube, which emits a different sound of speech according to the different position of its different parts (lips, teeth, tongue, &c., form of articulation).

Considering, first, the breathing apparatus, the lungs of a child, it is obvious that it has not yet grown and developed as much as is necessary to meet the requirements made by articulate speech. For, in order to produce the latter, the first requirement is a strong expiration, and the second an expiration precisely regulated. The inspiration innervated by the spinal marrow is, as is well known, brought about by the chest-muscles expanding the chest, similar to the action of a harmonica ; the lungs attached firmly and hermetically to the inner side of the chest follow this expanding movement, and into the space thus resulting and void of air, the air presses from outside, which is in turn thrust out as soon as the tension of the muscles relaxes, and the chest contracts in consequence therefrom. While thus during inspiration the chest is broadened and deepened, its longitudinal axis grows larger, for the diaphragm presses down during inspiration, while during expiration it takes again its vault-like shape, tending upwards. It appears now that with the suckling the muscles of the chest have been very little developed ; that breathing is brought about more by the falling of the diaphragm than by a vigorous expansion of the chest, and that, therefore, the breathing movements are not only more superficial, but also more irregular than in later life. Articulate speech, however, requires vigorous and regular breathing ; it requires that the speaker be able to emit at pleasure from his chest the inhaled air in larger or smaller quantities, that the speaker be able now to make the breathing mechanism work quicker, now to check it, which are all manifestations of power, which the suckling as yet is not able to put forth. Add to this that the larynx of the child is still very small and undeveloped in shape, that its muscles are still rudimental, and that the tension and contraction of the vocal chords at will is not yet possible. Likewise the tongue, the lips and their motory muscles are, in a suckling, undeveloped ; the teeth, which play so important a part in speaking, are lacking altogether.

The insufficient development of the ear is another checking influence in children as regards the acquisition of articulate speech. New-born children are, as is known, very insensible as to noises. The cavity of the tympanum with them is, at their birth, filled with a mucous substance, and though this disappears very soon afterwards, the tympanum has not settled into the vertical position which it has in later life ; its position is rather horizontal, by which, undoubtedly, hearing

is rendered more difficult. Observations prove that on an average not before the third until the eighth week after birth does the child receive clear and distinct sensations of hearing. Hearing, however, principally prompts the child, probably by reflex action merely, to imitate the noises or sounds heard by the voice, for which reason children that are born deaf remain mute also. As long, therefore, as the child does not hear distinctly, the motive for the first attempt at speaking is wanting, so that, therefore, the insufficient development of hearing has an important share in the original speechlessness of the suckling. Accordingly we shall see that the first imperfect speech of a babe coincides with the first proper receptivity of its ear for distinct impressions.

Lastly, we have to consider the rudimental state of the brain, especially of the cerebrum. The development of the brain, however, has a good deal to do with the development of speech. All movements of the human body proceed from the nervous system. Speech, however, considered merely in its bodily mechanism, is muscular motion, whose innervation, consequently presupposes nervous central organs acting properly and perfectly. Now those movements which we call conscious, intelligent, and judicious, proceed from the central organ in the hemispheres of the cerebrum; if these are taken away, truly spontaneous, intelligent, and judicious actions can, as is known, no longer take place. Of all intelligent, judicious movements of the organism, however, the movements of speech are obviously those in which intelligence and fitness manifest themselves in the highest degree, and the muscles of the organs of speech must, therefore, principally be innerved from the cerebrum. Aside from direct experiments of Hitzig and Fritzsche, Northnagel, Ferrier, &c., a proof of it is the interesting disorder known as aphasia. The patient apprehends the ideas and words perfectly intact, he hears and understands them when spoken by others, but despite all efforts he himself is entirely unable to utter a word, therefore unable to move the muscles of the organs of speech. In most cases, with such patients, it turned out that one part of the cerebrum was destroyed. Regarding the suckling, now, anatomical inquiry has shown that exactly that part of the brain is very imperfectly developed by which the connection between the cranium of the cerebrum and the parts of the brain at its base is brought about. This connecting line passes downwards from the cerebrum to the nucleus lenticularis and the corpus striatum, and thence by way of the lower semilunar portion of the substantia nigra of the crura cerebri to the spinal marrow. The connecting courses between the

front lobes of the cerebrum and the corpora striata, however, are as yet very undeveloped in a suckling, so that in the imperfect formation of the brain there appears another reason why it is unable to speak.

But, besides this, the psychical development is far behind the measure of intellectual high-pressure, without which the bodily machinery for speech cannot at all be moved, even if it were otherwise completely developed. The proverb says: "Of the abundance of the heart the mouth speaketh." We interpret it to mean that he who has something to say, whose ideas have attained to such a power and such a strain that there must be an open outlet for them, will necessarily pour speech out from his lips. But this strain and power of ideas is altogether wanting in the suckling—he has, as yet, got nothing to say; as yet, all his ideas which are made up of a few bodily wants, go forth in crying; he has, as yet, no desire to speak; there is in him, as yet, no psychical impulse to cause the vocal movements by which the thoughts are thrown out, and although the child's mind by virtue of transmission is far from being a *tabula rasa*, still, at first, all ideas are lacking that can be gained only by experience, as little by little and comparatively very slowly and gradually the gates of his senses open. As the brute during its whole life has not enough ideas to have the cogent desire for an actual articulate speech, so the child, it is true, only for the first fifteen months of his life, has not yet the ideas whose expansive power would appear in words; and if we observe a child's psychical development, the fact becomes evident that speech—we mean the acquisition proper of language—does not make its appearance until the bodily development not only has advanced relatively very far, but also in the same measure the psychical development.

The Germans call the first, dull, quiet period of a child's life "the sucking period;" the second, somewhat more lucid, "the smiling period." But the smiler can, as yet, not fully master his sense of sight; he can, as yet, neither see perspective, nor has he the perseverance to fix an object by the eye. This does not take place until in the third period of development, which the Germans call that of observation, and which is of prime importance, because not until the sense of sight is fully opened do the numerous manifestations of form enter the child's mind, and a fuller, more active and vigorous mental life begins. Not until then the child, incited by the things outside himself, is led and prompted to exert his influence on the outside world, has a new, important departure begun. The child grasps at things, desires constantly to handle them,

shakes and tosses them, touches them, brings them to his mouth and nose, and in that way discovers a wealth of new characteristics which the sense of sight alone could not bring about. The observer has become the handler; only as the child's hand seizes on things, touches them, handles them, and transforms them, his own actions, his human activity properly begins. But the handler, as yet, is master of the world only as far as his arm reaches; he cannot yet walk; things, therefore, must come to him, he cannot go to them, and, therefore, his sway over the world amounts to very little so far. But the impressions, which keep on entering through all the child's senses, suggest great desires in him; the distant things beckon him on, call and attract irresistibly; the child begins to follow the impulse; he slides along the ground, crawls, stands, walks, runs—he enters upon the walking period; and not until then, from the somewhat plant-like, stationary life which the child has thus far led, he gets the freedom necessary to enable him to enter the world and make the world enter his own being. And now the wealth of acquired ideas crowds in upon him so strongly, the intellectual tension becomes so mighty, that the psychical elements seek an outlet, that they overflow in speech; the child enters then the speaking period, and nothing has for some time so great a charm for the child as the practice and learning of the difficult art that more than anything else binds man to man. It is therefore necessary that not only the bodily apparatus, but also the mind of a child be developed to a high degree, before it can attain to the highest spiritual work of art—to language.

THE PHRENOLOGY OF GITEAU.

The trial of the assassin of President Garfield brought out some interesting facts about his phrenology. A cast of the prisoner's head was taken by Mr. Clark Mills, sculptor, of Washington. Both the sculptor and his son profess a firm faith in phrenology, and a New York paper publishes a conversation one of its correspondents had with the latter on the subject of Giteau's developments. "Speaking from a physiognomical point of view," said Mr. Theodore Mills, "Giteau is undoubtedly better looking with his beard off. His beard and moustache give him a wild, haggard look."

"Does he seem to you more intelligent with a clean shaven face?" asked the newspaper correspondent.

"Yes," was the reply, "he has rather a fine chin and expression of the mouth, with firmly closed lips, which indicate great firmness."

"Have you made a special study of phrenology?"

"No, but I have picked up a great deal by making casts of many different persons. I find the heads of people differ just as much as faces. I have never found two heads alike. Guteau's head is full on one side and flat on the other."

"What does that indicate?"

"To my mind it is the indication of a diseased brain."

"Have you seen heads of a like unevenness during your practice?"

"Most heads in our collection, while of course of different shapes, are about as full on one side as the other. We have not been able to get the heads of criminals to study that part of the subject. Guteau's head is $23\frac{1}{2}$ inches in circumference. My father regards it as a curiously shaped head. Daniel Webster's head measured $25\frac{3}{4}$ inches. Notwithstanding this difference, Guteau's Self-esteem and Firmness are as large as shown in Webster's head."

"Does the phrenological appearance of the assassin's head indicate the possession of much intellect?"

"It shows, in my opinion, that he possesses a great deal of low cunning. His Secretiveness is immense, but Caution is small. His Vitativeness or love of life is also large."

"What particular bump, or series of bumps, indicate insanity, to your mind?"

"First, Self-esteem and Firmness, these two organs predominate. His Self-esteem is so immense that it makes him believe he is really a greater or more important person than he is, and all the advice and talk in the world would not convince him to the contrary. His Firmness makes him keep to his opinion."

"But Self-esteem and Firmness do not necessarily constitute insanity?"

"Oh, no, but when a man has more than his share it makes him conceited, and as such he generally makes enemies through life, unless he has a large front head. It is no good reasoning with such a man. The large reasoning powers of Daniel Webster, for instance, would counteract the effects of large Self-esteem and Firmness, whereas the intellectual development of Guteau is not sufficient to counterbalance them."

"Then his large Self-esteem and Firmness, taken in connexion with his small intellectual development, is an indication of insanity?"

"I don't think, speaking exactly, that they indicate insanity; they rather indicate conceit; but still there is something odd about him. I don't know what it is, and would not say whether he is sane or insane."

“What are the more prominent organs on the flat side of the head?”

“Vitateness is full on both sides, Conscientiousness flat and small, and Caution small. The flatness is more towards the top than the side of the head. The first thing noticed when we entered the cell to take the cast was the wild staring of his eyes. His conversation, however, was as rational as that of anybody.”

“Do you find in your practice that a phrenological diagnosis of men agrees with their character?”

“As a general thing, I do.”

“How about Guiteau’s Veneration?”

“It is about the average, but it would have no effect on his character, owing, as a rule, to the great predominance of Firmness and Self-esteem.”

The measurement of the assassin’s head, taken with an instrument made for that purpose, and indicating the distance from the ear to the organs, are as follows, in inches: Individuality, 5; Eventuality, $5\frac{1}{2}$; Comparison, $5\frac{5}{8}$; Human Nature, $5\frac{3}{4}$; Benevolence, 6; Veneration, $6\frac{1}{2}$; Firmness, $6\frac{1}{2}$; Self-esteem, $6\frac{1}{2}$; Concentrativeness, 6; Inhabitiveness, $5\frac{1}{2}$; Philoprogenitiveness, $5\frac{1}{8}$; Amativeness, $4\frac{1}{2}$; Destructiveness, $6\frac{3}{4}$; Secretiveness, $6\frac{1}{8}$; Caution, $5\frac{3}{8}$; Ailmentiveness, $5\frac{3}{4}$; Combaticiveness, $4\frac{3}{4}$; Vitateness, $5\frac{5}{8}$.

It is worthy of note, in connexion with this diagnosis, that the photographs of the assassin seem to indicate a rather large organ of Marvellousness, which in a diseased state of the mind would account for pretensions to divine inspiration.

DR. J. M. GRANVILLE, in his work on this subject, says, with reference to the difficulty some persons find in getting to sleep: “Habit greatly helps the performance of the initial act, and the cultivation of a habit of going to sleep in a particular way, at a particular time, will do more to procure regular and healthy sleep than any other artifice. The formation of the habit is, in fact, the creation or development of a special centre, or combination, in the nervous system, which will henceforward produce sleep as a natural rhythmical process. If this were more generally recognised, persons who suffer from sleeplessness of the sort which consists in simply being ‘unable to go to sleep,’ would set themselves resolutely to form such a habit. It is necessary that the training should be explicit, and include attention to details. It is not very important what a person does with the intention of going to sleep, but he should do precisely the same thing, in the same way, at the same time, and under as nearly as possible the same conditions, night after night for a considerable period, say three or four weeks at least.”

MY WARD : A TALE.

BY A. S. JAMES.

CHAPTER I.

"I cannot leave Alice in better hands than yours, Tom, I know ; and that is why I have appointed you her guardian," said Henry, as he held my hand in his.

It was a beautiful evening in the middle of summer, and my friend, Henry Martin, sat in his chair by the open window watching the sunset.

"But I hope that this disease may not end so badly as you imagine, Henry," I said. "You may yet recover, and be spared to us many years longer."

"No, Tom, I shall not recover. Do not delude yourself. I have known for some years that my lease of life was short. I have not told you, because I did not wish to cause you unnecessary pain ; and, knowing that I had so good and faithful a friend as you, in whose hands I could leave my daughter, I have not felt so much anxiety on her account, as I otherwise should have felt. And now, Tom, I know that my end is very near. I shall not be here many days longer."

"If it is so, Henry, you may rest assured that I shall do my best for Alice. Her welfare and happiness shall be my only thought."

"I know it, Tom—I know it," said my friend, pressing my hand. "My mind is quite at ease on that score. And she is a good child, is she not, Tom?" he continued. "So amiable and affectionate! Her love will repay all your care and anxiety on her account. And next to myself, you have the best share of her affections already ; she could not love you more, if you were her brother."

"Yes, Henry, it is so," I replied.

Henry Martin and myself had been intimate friends for many years, although he was some years my senior. I was a bachelor, and he was a widower. He had married young ; but his wife, to whom he was exceedingly attached, had died in giving birth to a daughter. He had not married again, but seemed to concentrate his affections upon his child, and upon myself,—to whom he was ever a generous and devoted friend.

He resided at the village of Howden, a suburb of the busy town of Bowchester ; and, having a small fortune, did not engage in any business, but devoted himself to certain scien-

tific studies, in which he took an interest, and to the education of his daughter, whom he had called Alice, after her mother.

Alice was a lovely child, and as cheerful and happy as a child can be. She was remarkably intelligent too, and her intelligence was all the more developed by her constant intercourse with her father and his learned visitors.

I lived in the town of Bowchester ; and it was my constant custom, both before and after the death of Henry's wife, to spend the Sunday with his family. They looked upon me, and I regarded myself, almost as one of themselves ; and it was, no doubt, owing to this friendship that I did not form any close ties elsewhere.

When little Alice was about seven years old, I was called to the Continent by some important business matters, and remained abroad for nearly six months. I kept up a constant correspondence with Henry during this time, and, when the completion of my business allowed me, prepared to return home. I had written to inform my friends of my coming, and was already on my way, when I received a telegram urging me to hasten, as Henry was very ill, and anxious to see me. I now travelled night and day, and arrived at Howden one summer evening. It was soon after my arrival that the conversation above related occurred. As he had told me, Henry Martin's disease soon proved fatal. It was an internal disorder, from which he had suffered for some years, quite unknown to me. Three days after my return he breathed his last in my arms.

CHAPTER II.

I was greatly grieved at the death of my best friend, for such Henry had been. I had been much attached to him ; and, though I felt the responsibility of having entrusted to my care the bringing up, and education, and settlement in life of a young lady, yet I determined, though but a bachelor of but some twenty-five winters, that the confidence reposed in me by my friend should not prove misplaced. I was, moreover, very fond of little Alice ; and, as she lay in my arms sobbing out her heart's passionate sorrow for her lost father, I resolved to be a second father to her.

But what was I to do with her ? I myself lived in apartments. I could not take Alice to live with me there. Nor, if I took up my abode at Howden, would that mend matters, for I knew no one whom I could place in charge of my house and my ward ; my only near lady relative was my sister Fanny, who, with her husband, had been some years in India.

"Your only course, Mr. Harden," said Mr. Longway, the rector of Howden, whose advice I had sought in my difficulties, "your only course, as far as I can see, is to place your ward in a good boarding-school."

"But I am fearful of sending her among strangers," I replied ; "she is so young yet, and the change from her former quiet, almost solitary, life with her father to that of a school will be so great that I fear she would not be happy."

"I do not think so, Mr. Harden," replied the rector ; "she is naturally a child of a cheerful disposition, and so long as she meets with affection and kindness she will not fail to be happy."

"If I but knew of a school in which she would be sure to meet with affection and kindness !" I said.

"Fortunately, there I can help you," said the rector ; "I know of such a school, which is kept by a most amiable lady, the widow of a college friend of mine, a naval officer. She will be like a mother to your little ward, and it is a mother's care that Alice requires."

I learned, on further inquiry, that Mrs. Wood, the lady referred to, resided at the pretty neighbouring seaport of Gosport, where she undertook the education of twelve pupils, limiting herself to that number, because she considered that she could not do justice to more.

To Mrs. Wood, then, I committed Alice. I myself went over to Gosport continually, determined to watch her progress as carefully as if she were my own child. She soon attached herself to Mrs. Wood, who proved to be a very amiable lady, and she became the pet of the school by her sweet temper and her intelligence. To myself, however, she seemed to cling more and more. She was full of delight when I paid her a visit, and always bade me good-bye with tears.

After a short time I took up my residence at Gosport, returning to and from Bowchester daily by rail. This enabled me to see Alice almost daily, and to do much in forming and developing her character, and so well did she respond to every care bestowed upon her that this became a most delightful task.

Thus time went on, and Alice in a few years was no longer a child. As she grew older I noticed that her manner towards me became less and less demonstrative, but not less affectionate. She seemed to regard me as she had regarded her father ; and for myself, I felt my affection for her deeper and deeper, until, at length, my thoughts were always with her, and I became conscious that my happiness was bound up in her.

At last Alice was approaching her eighteenth birthday, and

I felt that I must do something to provide a home for her. I could not leave her at school always. For a long time I was undecided what to do. At length I decided to go and live in the old house at Howden. My sister Fanny, who had been left a widow some time before, was returning from India. I proposed, therefore, that she should come and live with me and Alice. This Fanny consented to do, and, soon after Alice's eighteenth birthday, we were all settled at her old home.

CHAPTER III.

We were, perhaps, as happy a family as any in the village of Howden. My sister was a good and kind creature ; but it was Alice that was the sunshine of the house. Lovely and accomplished, always cheerful and happy, she became the delight of all our friends. Mrs. Wood had developed her tastes and her intellect most successfully ; and so, though without any pedantry or vanity, she was keen of wit and comprehensive of understanding, while, at the same time, her manners were of child-like simplicity. Every morning when I left home to go to business, I parted from her with difficulty, but I returned at evening to her society with eagerness.

We had been some nine months living in this pleasant way at Howden, when, one evening as we sat round the fire,—for it was autumn, and the nights were chilly,—there was a knock at the door, and presently I was told that two gentlemen wished to see me. I left the drawing-room, and went downstairs to the reception-room, where the gentlemen were waiting. The one was a man of middle age ; the other a youth of about twenty.

“I presume you do not know us, Mr. Harden,” said the elder, rising, “but we are the uncle and the cousin of your ward.”

And he presented to me his card, which bore the name of Ralph Martin. I had, however, guessed who he was the moment I saw him, from his striking resemblance to my lost friend. This was Henry Martin's only brother, who had gone to America many years ago, and had not been heard of for so long a time.

“This is my son Henry,” he continued, introducing the other. Both bore a strong likeness to my friend, who had often spoken to me affectionately of Ralph, and had wondered why he did not write to him.

I welcomed them both very heartily.

“Your brother had long given up all hopes of your being yet alive,” I said.

"I have had many ups and downs in life," replied he, "and, through one thing or another, I neglected to keep up any correspondence ; indeed, I always detested letter-writing. But during the last few years I have realised a fair fortune through some very successful speculations ; and, as Harry's poor mother had died, I determined to return to England."

"You had no idea of your brother Henry's death, had you ?" I asked.

"Not the least," replied Mr. Martin. "We landed yesterday, and were taking pleasure in the thought of the surprise we had in store for him ; but on the very landing-stage I met an old acquaintance, who told me the sad news of Henry's death, and at the same time informed me that you were residing with your ward, my niece, in my brother's old home."

I now proposed that my visitors should come to the drawing-room, and be introduced to the ladies. They willingly consented.

Alice was astounded to find herself thus possessed of two relatives. Her uncle she had heard of, but never expected to see ; as for her cousin, she did not even know of his existence.

However, the first surprise was soon over, and we were chatting cheerfully together. Mr. Martin reminded me more and more strongly of my lost friend. He had the same winning way, the same benevolent look, and apparently the same amiability of disposition, combined with a somewhat rougher cast both of body and mind. His son Henry, too, seemed a good, well-disposed young man, and was certainly intelligent and handsome. We spent a very happy evening together.

Shortly afterwards, Mr. Martin and his son took up their residence in the village, in a house close to our own, and became constant members of our family circle.

CHAPTER IV.

As might have been expected, an intimate friendship sprang up between the two cousins. I could not disapprove of it ; yet it was painful to me. It suggested the thought of the time when I should lose Alice, and that was not a pleasant thought to me. But why should the idea of such a thing be disagreeable to me ? If an opportunity of obtaining a good husband for my ward arose, should I not, as her guardian, rejoice at it, and watch the development of her love with as much interest as her father would have done ?

These feelings of mine showed me that Alice had a hold upon my affections different from that which I had hitherto imagined. I endeavoured to deny this to myself ; I tried to

take an interest in Harry. He was certainly a youth of sterling merit, and I could not but approve of him as a husband for my ward. I tried, therefore, to look upon their future marriage as a settled thing, to reconcile myself to the thought, and to be happy under it,—but in vain.

Alice seemed to attach herself greatly to her cousin. While I was at business, that is during the greater part of the day, they were thrown very much together. Indeed both Mr. Ralph and his son were more at our house than at their own. Both he and my sister began to speak with me about the probable match between the young people, and both evidently regarded it with pleasure.

“They will make a handsome couple, will they not?” said Mr. Martin to me one evening, as we sat in the garden; he smoking his cigar,—for I never smoked.

“Yes,” I said, “they would certainly make a handsome pair; but do you think that Harry really looks forward to such a thing?”

“Certainly he does; he has spoken to me of it many times. He asked if I should approve of it some time ago. I told him I approved of it most heartily, if he could get the consent of Alice and yourself.”

A pang shot through my heart; but I concealed it. “I cannot disapprove of such a match,” I said, “if Alice should desire it.”

“Thank you, Harden, for that,” said Mr. Martin, shaking my hand warmly. “Yes,” he continued, “I think they are made for each other.”

“Has Alice given him any grounds for believing he will be successful?” I asked, almost with fear.

“Nothing has been said as yet,” said Mr. Martin; “but Harry builds great hopes upon her evident liking for him.”

“We must allow something for cousinly love,” I replied, “which cannot but exist in so affectionate a girl as Alice, and especially towards so amiable and handsome a cousin as Harry.”

“That is true,” answered he. “Alice is a most loving creature, and full of kindness. But it will come—it will come! Look at them now!”

I looked towards the young couple. They were seated on a bench at some distance, partly concealed from us by the foliage of a tree that overhung them. They were evidently in very earnest conversation. Alice was turned slightly aside, so that we could not see her face; while Harry was bending over her with his hand on her shoulder.

I felt sick at heart. I arose and proposed we should walk

a little. The conversation continued for some time on the same subject, and very miserable I felt. I dreaded—oh, how much!—the result that Mr. Martin evidently looked forward to with such delight.

“Harden, there is another subject I wish to mention to you,” said Mr. Martin, after some moments’ silence.

“What is it?” I asked, with assumed gaiety.

“I have asked your sister to accept me as her husband, and she has consented ; only asking me to obtain your consent.”

This was totally unexpected.

“You take me quite by surprise,” I exclaimed. “Why, what sly wooers you are ! I had not the slightest inkling that any such thing was on the tapis.”

“I hope you approve of it, however,” said he.

“Approve of it ! I am delighted,” I exclaimed.

“Thanks, Harden. If the young people make it up soon, the two weddings can take place together. If you would find a nice wife too, Harden, that would be grand.”

I felt as if he had thrust a knife through me.

“You are not well, I fear,” said he.

“No, I do not feel very well. But it is nothing. Shall we go in to my sister?” I asked.

So we went in, and found Fanny in the drawing-room.

“Ah, Fanny, what have you been doing?” I said. “But I don’t think I shall let him have you after all. I cannot spare you.”

“Won’t you, Tom? That would be selfish now!” said Fanny, laughing.

Thus we chatted for some time, I trying to master the feelings that were tearing my heart, and to conceal them under assumed merriment.

CHAPTER V.

After some time Alice came in alone, quiet and rather pale. We asked where Harry was, and she told us he had left her a quarter of an hour ago. Something unusual had evidently occurred, yet we avoided any inquiry. Mr. Martin’s eyes, however, often sought Alice’s, as if in mute inquiry ; but she turned her head away. Presently he rose to go. After bidding good night to the ladies, he made a sign to me that he wished to speak to me ; so I passed into the garden with him.

“I think Harry must have popped the question,” he said ; “and, judging from Alice’s looks and his disappearance, I fear he has done so prematurely.”

This thought,—must I confess it—this hope had passed through my own mind ; but I dared not entertain it.

“Ah, no,” I said ; “you need not come to such a conclusion.

Many things may have occurred that would account for what we see, without supposing any such thing as that."

"I hope you are right, Harden," he replied ; "but we shall soon know. I will go home, and see Harry. I hope the course of the poor lad's love will run smoothly."

I bade him good-night, and stood watching him as he went down the lane. I stood so for some time, occupied with my thoughts, when a hand touched my arm. I turned and saw my sister.

"Tom," she said, "Alice has refused him."

"My heart leaped into my mouth."

"Has she, Fanny?" I said, as quietly as I could. "Has she told you why?"

"No," said my sister ; "but I can guess why, Tom."

"Tell me just what has occurred, Fanny," I exclaimed, rather eagerly I fear, for I was trembling with excitement.

"But Tom, you seem quite agitated about it," said Fanny.

"Never mind, Fanny,—tell me all about it."

"Well," said Fanny, "as soon as you and Ralph had gone, Alice came and sat on the sofa by my side. She put her arms round me, and laid her head on my breast, and burst into tears."

"What is it, darling?" I asked.

"Harry has asked me to be his wife, Fanny," she said, "and I cannot."

"Why cannot you, Alice?" I asked ; "I am sure you love him."

"Yes, Fanny, I do love him ; I cannot help that, because he is so nice and kind ; and then he is my cousin, you know. But I do not want to marry him."

"We all thought it quite a matter of course," I replied ; "you both seemed so fond of each other. It would have been an excellent match in every way. Harry would make a good, kind husband."

"Yes, I am sure he would," she said, with a sob.

"Then why do you refuse him?" I asked. "Perhaps he would have done more wisely if he had waited a little longer. He has taken you by surprise."

"Yes, Fanny, he took me quite by surprise ; I had no idea of such a thing," she said.

"But you will get more accustomed to the idea by-and-by, and then, when he asks you again,——"

"No, no, I cannot marry him. I do not want to leave you and my guardian," she said.

"But you cannot stay always so, darling !" I said, "tell me, Alice, you do not love anybody else, do you?"

"She did not speak, but sobbed quietly. And, Tom, I think I understand how it is. But why do you tremble so?" my sister exclaimed ; "and you are as white as a sheet!"

"Ah, Tom, I see it all now," she said, after looking inquiringly in my face for a moment. "Alice is in love with you, Tom, and you are in love with her! What a stupid I have been not to have seen this before. And you would have let her marry her cousin?"

"It would have broken my heart, Fanny, I know," I said, sinking into a seat. "But if it had been for her happiness, what else could I have done?"

"But it is not for her happiness, you dear, good self-sacrificing creature?" Fanny exclaimed, embracing and kissing me. "And now come away, and make Alice happy too, for I am sure that is her secret."

"Do you really think so, Fanny?" I asked, timidly.

"Of course I really think so; what else can it be, you stupid unbeliever?" and she forced me along with her.

Alice was sitting on the sofa, her face buried in her hands.

"Alice, darling!" I said, laying my hand softly upon her head.

She started up, and threw herself into my arms, sobbing, "Oh, do not let me leave you!"

I felt that Fanny was right.

"No, darling, you shall never leave me till God parts us," I said, and kissed her.

Alice stood for some moments quite still, with her face against my breast. Then she raised her head, and, with her eyes full of tears, said, "Oh, I am so happy now! But poor Harry!"

Mr. Martin came early the next morning, and I explained to him what had occurred.

He was a good deal surprised on hearing the news, and evidently much disappointed for poor Harry's sake; but he sympathised with me, and congratulated me heartily.

Two months later, the parish church of Howden was the scene of a double marriage: my ward became my wife, and my sister became Mr. Martin's.

Harry felt his loss severely, but he bore it manfully. He felt no grudge against me for having deprived him of Alice; for he saw that I had intended sacrificing myself for the sake of Alice and himself. He would not, however, stay to see the wedding. He felt that the trial would be too great, poor fellow. He therefore returned to America.

One day, five years after, while the two families, now enlarged by the addition of several prattling youngsters, were assembled in the garden celebrating our common wedding-day, a gentleman and a lady stopped at our gate and entered. We advanced to meet them.

"It is Harry!" exclaimed Alice, as she rushed to greet him. The lady was Harry's wife.

Facts and Gossip.

STATISTICAL researches as to the colour of the hair and eyes of children have been made in all the cantons of Switzerland, with the exception of Berne, Geneva, and Tessino. The investigation as to the first of these cantons is now terminated, and the results of the examination of 94,221 children are published by Professor Studer in the *Proceedings* of the Berne Society of Natural History (No. 989), and are accompanied by four coloured maps, which show geographically the results. It is seen from these researches that in the canton of Berne the dark type prevails over the fair, but that the pure types are not so numerous, especially in the central parts, as the mixed ones. The pure fair type, which makes 9 to 11 per cent. in the north-eastern parts of the canton, increases to the south (11 to 14 per cent. in the middle parts, and 15 to 20 per cent. in the Alps), and reaches its highest percentage in the secluded valley of the Saanen (28 per cent.) The dark type is most numerous in two regions—that of the western lakes and Old Rhætia (21 to 29 per cent.), whilst in the middle parts it reaches only 21 to 25 per cent., and only 16 to 20 per cent. in some secluded valleys. After having shown the distribution of mixed types, Professor Studer considers these data in connection with history, and comes to several interesting conclusions.

ONE of the grand secrets of success in life is to keep ahead in all ways possible. If you once fall behind it may be very difficult to make up the headway which is lost. One who begins with putting aside some part of his earnings, however small, and keeps it up for a number of years, is likely to become rich before he dies. One who inherits property, and goes on year by year spending a little more than his income, will become poor if he lives long enough. Living beyond their means has brought multitudes of persons to ruin in our generations. It is the cause of nine-tenths of all the defalcations which have disgraced the age. Bankers and business men in general do not often help themselves to other people's money until their own funds begin to fall off, and their expenditures exceed their receipts. A man who is in debt walks in the midst of perils. It can not but impair a man's self-respect to know that he is living at the expense of others. It is also very desirable that we should keep somewhat ahead in our work. This may not be possible in all cases, as, for instance, when a man's work is assigned for certain fixed hours, like the operatives in a mill. There are certain classes of people who can choose their time for the work which they are called to do, and among them there are some who invariably put off the task assigned them as long as possible, and then come to its performance hurried, perplexed, anxious, confused—in such a state of mind as certainly unfits them for doing their best work. Get ahead and keep ahead, and your success is tolerably sure.

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MR. JOSEPH LIVESEY.



MOST men of work and note have strong and weak traits of character, sometimes bordering on eccentricity ; but Mr. Livesey is one of the most plain, simple-hearted, and unassuming of men, with no pretensions, save those of being an honest temperance man. Surely he is the most consistent temperate man I have ever known—for he is temperate in all things. He has no extremes in his organisation, and his life and actions have been uniform. Few men are so well-balanced in mind and body, or have been so consistent in life and character. He is not organised on an exquisite and high-toned key, but he has a copious supply of warm blood, and is full of vital force and animal life. He has a good amount of the vital temperament, as indicated by his round, full, and well-proportioned body ; and is well represented in both the motive and mental temperaments. His harmony of organisation gives balance of power and consistency of life, hence he seldom makes mistakes, or leaves things half-done. He has a strong constitution, and sound health, is free from disease, and therefore is always in a condition to work. He is in his element when he has his harness on, and is busy. He acts upon the principle that “time is money,” and “money is power.” Few individuals are so favourably organised to enjoy and employ every hour of their lives as he ; and he makes the most and the best of everything. In starting in a new course of action, or in laying new plans, he takes all things that have a bearing upon them into account, and considers matters well before he decides or commits himself ; consequently he seldom reverses his judgment, or regrets the course he has pursued. He starts as he can hold out ; and appears to be as equal to the task when he leaves off as when he started. He is disposed to take strong ground and make bold statements, yet is able to prove almost

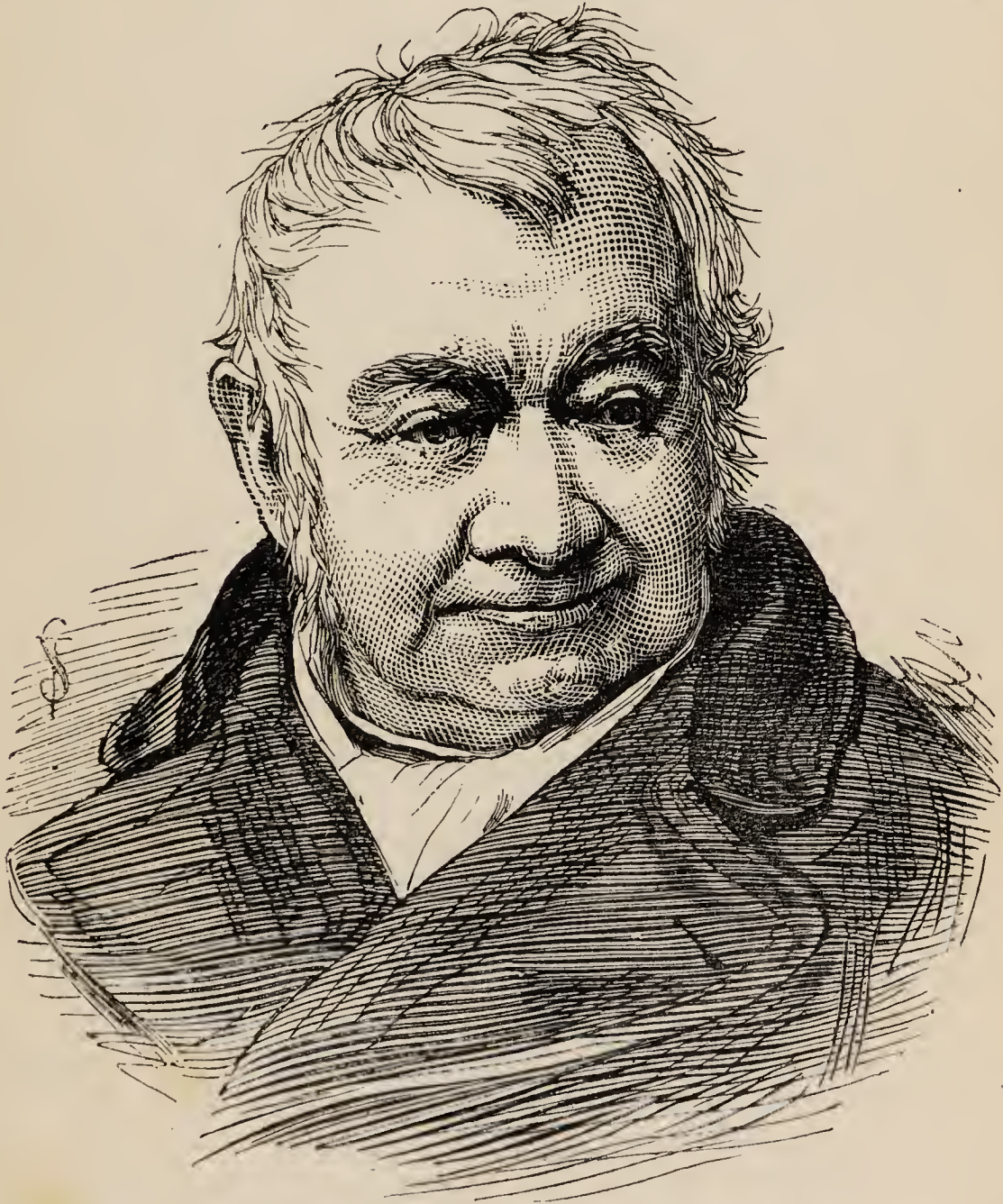
all he says. In times of the greatest excitement and opposition he is self-possessed and able to control his feelings.

His domestic disposition is very strongly represented. Few enjoy home, family, and domestic life more than he does. Few value wife and children more. His social nature is equally strong, for he is mindful of the presence of his friends, and has a happy faculty of entertaining and making them feel at home in his society. He is a man of habit, does everything by rule, and dislikes to change unless there is a necessity for it. He has order and regularity in the family, and takes a personal interest in all about him. He is anxious to have his children surrounded by good influences, for he believes in training and guiding children at the outset, rather than in indulging them at first and punishing them afterwards. He has great executive ability, and does not stop at trifles. He is prepared to defend his principles and liberty to the last; yet he loves peace, and avoids strife and law-suits. Being constitutionally industrious, he easily finds something to do; and having once "put his hand to the plough," he is the last man to turn back. He not only has the elements of industry, but of economy. He does not want to work for nothing, but desires either to benefit himself or others. He is sufficiently conservative to take care of what he earns, so that there shall be nothing lost; yet he wants property to gratify his other faculties, rather than to hoard. It affords him as much pleasure to spend it in doing good and in benefiting others as it does to make it; but he has no sympathy with beggars and idlers. He would make them earn their bread before he gave it to them; but he spends freely to elevate, educate, reform, and improve the community, and in this way is continually doing good.

He is independent in his feelings, relies on himself, and is willing to take the responsibility of his own actions. He is not proud, domineering, or dictatorial; but feels like a man among men. He dislikes to be under obligations to any one, or in debt for anything. He weighs and balances a question, and takes ample time to decide; but when fairly convinced he is right, it is almost impossible to change his decision. He is firm, steady, persevering, and tenacious of his own way. He is sure to put into execution his resolutions and views; but although he is very firm, he is not stubborn, for he will listen to reason and be influenced by it. With him, right is right, and wrong is wrong; and, without being rigid or intolerant, he is very careful to keep his engagements, and to do what he thinks is right. He is hopeful, buoyant, and elastic in his spirits; is always looking ahead. As a business-

man he is enterprising ; as a moral man, his hopes are strong with reference to immortality ; and in matters of faith, his mind is open to conviction, yet he is not quick to adopt new articles of faith or to deal much in the supernatural or wonderful.

Veneration is not large enough to lead him to be very ceremonious in matters of worship, or to cater to aristocracy, or a "red-tape" mode of transacting business. He has as



little to do with preliminaries and ceremonies as possible. Benevolence is large and active, and his entire organisation favours its manifestation. It is a powerful stimulant to all his movements, and disposes him to make many personal sacrifices for the sake of benefiting others. He throws his whole soul into all he does, and is much interested in all movements calculated to elevate and improve the race. In his general disposition, he is frank, candid, open-hearted, and

free-spoken, yet has sufficient shrewdness to know when to talk and when to keep silent. He is cautious and prudent, but not timid or irresolute.

His intellectual faculties are of the most practical and utilitarian kind. He cares but little for speculative philosophy or for abstract questions ; but is content to know what is true and useful. He reduces his thoughts to practice, and has a tangible, definite, common-sense sort of intellect. He learns much from observation, experience, and contact with the world ; hence he talks and writes with a definite object in view. He quickly sees the relation of one thing to another as to fitness and similarity, makes correct comparisons, draws appropriate conclusions, and is particularly alert to perceive the effects of certain causes. He is a good judge of property, of men, things, and circumstances. Language is large enough, with a due degree of excitement, to enable him to be a free, easy talker. His scholastic memory is not good, and he cannot readily recall the ordinary events of the day ; but he remembers what he sees and does, where he goes, and what occurs as connected with his own business and experience. He reasons by analogy, is apt in his illustrations, correct in his deductions, and direct in his mode of putting things. In speaking or writing he goes straight to the point, and thus he is able to make a much more distinct impression upon the age in which he lives than many who have been more excitable, and subject to great extremes of mental and physical development. This was particularly true of him when he was in his prime, and full of vigour and strength. But although he is now in his eighty-ninth year, he is still working in the cause of temperance, in which he is one of the earliest labourers, as earnestly as most men who are much his juniors.

Space will not allow of more than a very brief review of the main features of the life and work of Mr. Livesey. Born March 5th, 1794, at Walton, in Lancashire, he was in early life bereft of father and mother, who both died of consumption in 1801. Living with his grandfather till he was twenty-one, he worked in a damp cellar as a hand-loom cloth manufacturer. He says, " This cellar was my college, the breastbeam was my desk, and I was my own tutor." Under the sore discouragements of deep poverty, and the total lack of educational opportunities, he always entertained a hope that better days would come ; and brighter days did ultimately come to reward the diligence and perseverance of his efforts. Drunkenness prevailed at Walton, and " Saint Monday " was regularly

kept. He was surrounded by mental darkness and vice, and without the companionship of congenial spirits, till he became acquainted with a family of the name of Portlock, some of whom were decidedly religious. When about sixteen he began to feel the value of existence and the importance of sacred things. After his marriage, which proved a very happy one, he was led by a trivial incident to begin to sell cheese, and step by step attained a good business position. In 1832 he commenced the printing business, and in 1844 started the *Preston Guardian*. He took an active interest in the work of the Anti-Corn Law League, and circulated large numbers of its different publications. In 1831 he solemnly vowed he would never take any kind of intoxicating liquor again ; and formed the young men of an adult Sunday-school under his care into a temperance society. In 1832 the total abstinence or teetotal pledge was taken as the basis of a new movement, which was represented by the *Moral Reformer*, afterwards merged into the *Preston Temperance Advocate*, and transferred in 1837 to the British Temperance League, by whom, in a somewhat altered form, it is still published. This was the first exclusively teetotal periodical. Tracts and other publications have been issued by him in marvellous numbers, and very widely circulated. Lecturing and public labours of all kinds have been successfully engaged in by him, and a large family faithfully reared and educated ; and so much good accomplished in various ways, that on reviewing the record we ask, in astonishment, how it is possible for so much to be attained in the course of a single lifetime ?

Mr. Livesey has adopted a vegetarian diet under a conviction that to do so was at once the wisest and pleasantest course. To the temperance cause he says he has devoted more time and more labour than to any other, for he always saw that it lay at the foundation of all personal and domestic happiness, and of every social and political reform.

A pine-tree standeth lonely.
 On a dreary northern height ;
 It sleepeth, with pallid cover
 Of ice and snow bedight.

It of a palm-tree dreameth,
 That far in the eastern land,
 Silent and lonesome pineth
 On the burning rocky strand.

HEINE.

PHRENOLOGY IN RELATION TO
RESPONSIBILITY.

A very natural fear on the part of those who are deeply religious, and consequently jealous of all that they conceive to be fundamental to Christianity, is that phrenology, good in many respects, and almost fatally true, strikes at the doctrine of human responsibility. Take a man, they say, with a low type of organisation, fully provided in the region of the propensities, but cruelly wanting in the region of the intellect and moral sentiments, and tell us how that man is to be good. It is no fault of his that he is possessed of such a deplorable organisation ; other hands than his have woven the tissue of his being, and freighted him with every faculty to hinder, and little of any to help. Without his interference, without his consent, he is cast in a mould which seems to determine him to the basest uses, and to throw him like an infection upon the world. Surely you strike at his responsibility when you declare him to be so constituted, and you extenuate, if you do not altogether excuse, any excesses that he may run into. Now in presence of such a case as this, not an improbable case, but the representative of a large class which has been bequeathed to us by the excesses and immoralities of the past, it should be remembered first that phrenology does not make the facts. It is as irresponsible for his being as he is himself. It has not compounded him of elements inimical to his own well-being, and the well-being of society. If its advice had been taken by his ancestors he would never have been in the deplorable position that he is. The function of phrenology is to help to provide well-born, well-developed children, and not mere wastes of human nature, arid and barren to all of beauty and goodness. Phrenology only *declares* the facts, reluctantly, sadly, and in the declaration not only forewarns, but forearms both the individual and society. And in the declaration it neither abates nor increases his responsibility one jot. That certainly does depend, to a certain extent, upon his constitution, but the indication of the constitution cannot affect it one way or another. Teach the man that he is as morally capable as the most richly endowed of his fellows, and do you help him ? You deceive him as to the facts, you give him no power with the deception, and you leave him to fight his own battle as before. Tell him of the weaknesses of his nature, of his proneness to fail in certain specific relations, and you put him upon his guard. At the

same time you bring to his recognition the possession of those faculties which, in their proper cultivation, will enable him to overcome the bias of his nature. I admit that his development may be so represented to him—not as phrenology *does* represent it, but as some think it does—as to lead him to presume on his inherited, and as he may think inevitable, predispositions, and even to abandon all hope of honourable struggle and attainment. But this is not phrenology. It never admits the absence of responsibility except in the case of mental or moral idiotcy or insanity. In that case the Church is as willing to admit its absence as the phrenologist. In all other cases it declares responsibility, and offers its aid, as far as a philosophy may, to help it.

But, in common with the Bible, it does not declare equal responsibility. It recognises a wide diversity of endowment, that one man has gifts which are denied to another, and in the equity of its findings it declares that a man is responsible only for the talents he has, and not for those he has not. If he has a gift for poetry he is responsible for that gift, if for painting for that, but if he has neither he is responsible for neither. Unfortunately, many who have neither are responsible for attempting the impossible, and for flooding the world with useless daubs, and puerile vapourings. But where the gift is there is the responsibility. And the same thing holds good in the moral sphere as well as in the mental.

To take an illustration from Scripture. No one of the most impressive parables He ever uttered, one which He elaborated with peculiar fulness, and explained with unusual perspicuity, Jesus Christ likened human nature to soil. A sower went forth to sow, and when he sowed, some seeds fell by the wayside, some upon stony places where they had not much depth of earth, some among thorns, but “other fell into good ground, and brought forth fruit, some an hundredfold, some sixtyfold, some thirtyfold.” Without unduly pressing the parallelism between the stony ground and those developments in which the propensities greatly predominate over the intellect and moral faculties, or the ground which, not so much wanting in earth, produced the thorns, and the developments in which the moral sentiments are fairly represented but are closely pressed by the propensities or the good ground, and those characters in which all the faculties are represented, but in which the mental and moral powers predominate over the propensities, one thing is clear that Jesus Christ recognised a profound difference among human beings. The seed in each case was the same, the sower was equally diligent over the whole task, but the results were different, essentially

different, because of the essential difference in the ground sown. And this teaching of Jesus Christ, this recognition of difference of ability in human beings, is the teaching of every-day experience, of all intelligent observation, and of true phrenology.

But not content with this single recognition He recurred to the subject again. This time the figure was changed, but like the first, it was singularly expressive of the same truth. He likened the kingdom of heaven to a man travelling into a far country, who called his servants together, and distributed to them of his goods; unto one he gave five talents, unto another two, and to another one; to every man according to his several ability. Then he that had received the five talents went and traded with them, and made other five; he that had received the two made other two; but he that had received the one went and digged in the earth, and hid it. They were not equally entrusted, but each according to his natural parts. They were not equally responsible, but each according to the measure of wealth entrusted to him. The servant with the one talent was not held responsible for five, but only for one, and the one with two talents was not held responsible for one only, but for two. Endowment was made the basis of responsibility—the measure of responsibility.

Phrenology, however, has to do with endowment rather than responsibility. It has to take note of the soil and the talents. To disclose potentiality, adaptability, tendency. And in doing this—in indicating the measure of responsibility—it cannot justly be said to destroy responsibility. At the worst it can only be said to limit it in some cases, to extend it in others, and in every case to make it a matter of degree; and this is rather its practical result than its real and true function. But were it to lay itself out to do this, and to do it along the lines of endowment, it would only be following the teachings, not of Nature only, but of the founder of Christianity Himself.

But really phrenology concerns itself only with the soil. It does not attempt to invade or supplant the function of the theologian. It does not pretend to deal with those supernatural sources of power which are exterior to the man, and which it is the privilege of the Divine to press upon the world—power which is as much at the disposal of the moral paralytic as of the moral hero. As geology concerns itself only with the crust of the earth, the order of its strata and the materials of which it is composed, without invading the province of astronomy, or concerning itself about the heavenly bodies, so phrenology concerns itself about the features of the

race, and the development of the individual, without invading the province of religion.

The practical question therefore is, Is it better that a man should be acquainted with his own mental development, that he should have revealed to him, if he has not discovered them, the talents that he is endowed with, the weaknesses that he is liable to, the bents of his character, or that, in fear of some false construction that he may put upon them, he should be, as far as he can be, kept in ignorance of them?

The earlier apostles claimed that "as poor they made many rich," and in no sense was this truer than in the sense that they opened up to men the wealth of their own natures, the capabilities of their own hearts, the possessions which they possessed in themselves. The phrenologists may claim here a kindred usefulness. In disclosing men to themselves, they have put them in possession of inestimable wealth. They have saddened some perhaps by the disclosure of unexpected disabilities, but they have gladdened and inspired the many by a revelation of unexpected powers and unperceived abilities. Man has been lifted into a new light, his potentialities lifted into a new obligation, and his very weaknesses into an inspiration to fresh effort. Surely this is not assailing or destroying human responsibility.

There is one form of responsibility which phrenology, by the very course which is impugned, magnifies and emphasises a form of responsibility which religion itself has not yet emphasised as it ought: that is the responsibility of the parent. Phrenology takes the enfeebled development of the child, hot in passion, meagre in intellect, low in tone, and declares that such a child is not in the plan of God. It goes behind the child to its parents, and to its parents' parents, and charges there the perpetration of a great wrong. It declares that the will of the Creator is that no such child should be born, and that physiological and moral laws must have been broken before such progeny was possible. While making the child accountable for what it has, it extends the accountability backwards, and declares a wrong anterior to its birth. But it does not stop here. It uses the case as a warning to those who are the parents of to-day, and to those who are to be the parents of the future. It declares that they are largely responsible for the developments of the children they beget, and it demands, not only in the name of science, but of God, that parents should be wisely mated, and that children should be well born. For three thousand years the world has known that the sins of the fathers should be visited upon the children unto the third and fourth generation; but

neither priest nor prophet has given to it its due significance. Here the Church has been at fault—has failed to emphasise a responsibility as solemn and far reaching as can ever fall on man. Phrenology exalts this, presses it home, yokes it upon every parental neck, and in doing so, renders an inestimable service to the future as well as the present. Just to the child it is also just to the parent ; while it refuses to overload the child with a responsibility in excess of its endowment, it refuses to underload the parent in anything pertaining to the transmitted qualities of the child. In this way it seeks to be true to the present, true to the future, and true to God.

H. VIAN WILLIAMS.

MR. GALTON'S PICTORIAL AVERAGES.

Mr. Galton and Dr. Mahomed have been studying the physical signs of consumption by the method of what Mr. Galton has named "pictorial averages." This very ingenious and painstaking student of the facts of Nature has, as our readers probably know, applied the methods of photography to present to the eye the nearest thing to what logic calls a "general term" which is presentable to the eye,—*i.e.*, a picture embodying the characteristics of many individuals, so far as these individuals agree, and either vague or misleading in those in which they differ. Thus, if what the photographer means by "a negative," *i.e.*, the sensitized plate destined to receive the image of a single individual, needs 200 seconds' exposure to the features of that individual face in order to be made an effectual likeness, Mr. Galton takes such a plate and exposes it to twenty other negatives, taken from those persons of whom a class-picture is required, for ten seconds each, the result being a "composite" picture, which vaguely combines the characteristics of all the twenty persons, giving, of course, most effectually those features or expressions in which all, or the great majority of them, closely resemble each other and blurring effectually those features or characteristic expressions in which the great majority differ from each other. Mr. Galton and Dr. Mahomed have in this way endeavoured to get a pictorial average of persons affected by consumptive disease, and they have at present come to only a negative conclusion, which is this,—that so far as their investigation has carried them, no special type of face predominates among consumptive patients, and that the very commonly received idea that the narrow, egg-shaped face is more characteristic

of consumption than of other diseases is probably false. Mr. Galton thinks it may yet prove that the course of consumption, when it attacks persons of the narrow, egg-shaped type of face, is different from the course of the disease when it attacks persons of a different constitutional type, but he is tolerably well satisfied that this type of constitution is quite as liable to other diseases as it is to what has hitherto been thought its chief danger, the tubercular type of disease. His impression evidently is that this type may imply a specially delicate constitution, which may collapse more easily before *any* severe disease than other types of constitution would ; but if so, that would only show that it has more to fear from disease in general than other types, but has no *special* enemy in tubercular disease, as distinguished from other forms of weakness and suffering.

That may be a very sound conclusion, but we cannot say that Mr. Galton's pictorial averages strike us as affording a very trustworthy method of inquiry. It looks like a very great feat to produce something visible to all eyes which may be called the picture of a class. But it has this defect,—that, as we have said, it blurs every characteristic in which the individuals of that class decidedly differ, even though the characteristic in question may be something which, for some of the purposes needed, is extremely important, as, for example, *size*. The outline of a number of faces of very different sizes when thus compounded will obviously be very much blurred, and most of these “composites,” and still more the composites of composites, obviously are blurred in outline. Now supposing, what is, of course *possible*, that it were in some characteristic of the outline that the essential note of the consumptive type of face were really to be found, then the essential thing would be necessarily hidden from view in the blur caused by the varieties of these faces in size,—almost as much hidden from view as though the essence of it lay in some characteristic of colour or complexion, which it is obvious enough that photography must fail to give. If, then, the essential point consisted in some fine characteristic of contour, or some fine characteristic of colour, these “composite” pictures, which necessarily confuse the outline, and cannot give the tints of colour at all, would fail to serve us. Hence a “pictorial average” may miss the secret required, either because,—when acting by this photographic method,—it cannot take the average of one particular quality at all, like colour, or because, in the process of averaging another quality, like size, it is compelled to blur over the truth in relation to some third quality which may be of still higher

importance, like contour. But what interests us is, not so much the chance of failure in this mode of investigating the diathesis of disease, as it is called, through the missing of some feature necessarily blurred over in these composite pictures, as the illustration this gives us that by these physical methods you never can really arrive at what the thinker means by true generalisation at all, but only at a more or less confused and misleading picture, which has some of the characteristics of a generalisation here and others there, but is very apt to misrepresent the whole in the very process of striking an average. Thus, some of the consumptive patients wear moustaches and beards, while others wear none. Of course, the result is that in the "composite picture" there is a special shadow over the mouth and chin, which looks like *incipient* moustache and beard, but has neither the clean outline of the shaven lips and chin, nor the flowing hair of the unshaven. Well, just as this pictorial "average" misrepresents equally the shaven and the unshaven patients,—or just as an average taken partly from male and partly from female faces would misrepresent equally the male and the female type of face,—so, too, in less conspicuous matters, the average taken of two quite different expressions is as likely as not to suggest something essentially different from either and from both. You do not get any true type or class in a "pictorial average," but rather a confusion between several types. And, in point of fact, Mr. Galton found his only really instructive method, even with consumptive patients, was to make pictorial averages of the faces most nearly resembling each other in constitutional structure, *i.e.*, to reduce the blurring process—which hides, instead of revealing—to the smallest possible dimensions. We doubt whether Mr. Galton himself attaches much importance to "composite pictures" when obtained from compounding likenesses of individuals not already classed by him and his colleague as presenting some special common quality, or to the co-composites, as he calls the composites of composites. Indeed any value his method has, depends, in our opinion, on its emphatic seizure of the qualities in which the faces really agree, and not in its blurring-over of characteristic differences. The value of the process, if any, depends much more on lending a kind of visual vividness to those careful classifications of observation which precede it, than on that clumsy elimination of differences which results in vague outlines and mixed expressions.—*Spectator*.

THE PERCEPTIVE FACULTIES.

The highest powers of the human mind are the intellectual. They are given to man to enable him to investigate all subjects, laws, and principles, and to know all things. All things considered, what is not right for man to know, he has not the capacity to acquire. There are degrees of knowledge. Some things cannot be known, only as the way is prepared by other truths. There are John the Baptists—fore-runners—in everything. Simple truths lead to higher ones, to those more complicated, and so on up to the highest.

The intellect is seated in that portion of the brain situate in the forehead; in what may be termed the frontal lobes. The forehead may be retiring, and yet this lobe be long. Power depends upon length of fibre as well as upon breadth of these organs. Hence we see persons with expansive foreheads and weak intellects. There is not length of fibre. Napoleon, Michael Angelo, Webster, Swedenborg, are all long in this lobe. When the perceptive faculties are very large, and the forehead is retreating, some are led to suppose that the reasoning faculties are moderately developed, when in fact they are large. It is only because the perpectives are so large as comparatively to throw the reasoning faculties in the shade. Melanchthon had all the intellectual faculties largely developed. Henry Clay had a retreating forehead. His perpectives were so very large, as comparatively to cast the development of his reasoning faculties in the shade. Phrenology gives us the true key to intellectual greatness. A man may have a brain of quite moderate size and be remarkable for some things. Zera Colburn astonished the world by his arithmetical calculations; yet his reasoning powers were small, and upon all other topics he was a most ordinary, if not an inferior, man. Some have an extraordinary talent for talking; they have great memory of words. And others are distinguished as marksmen. Daniel Boone, of Kentucky, was an example, while his powers as a reasoner were but moderate. He had the power of perception to an astonishing degree, which fitted him for distinction in the circumstances by which he was surrounded.

A truly great man differs essentially from the smart man. Perceptive intellect introduces us to the physical world. It makes us acquainted with facts as facts, but it does not inform us as to the relations which subsist between them, nor as to the causes or consequences connected with their being

or existence. It is necessary for us to know all the facts in nature, as in chemistry, botany, mineralogy, &c. The perceptive faculties give us knowledge of all these things in their individual qualities. They collect information. Persons with large perceptive intellect and moderate reasoning faculties will study the particular qualities of everything, but without investigating its relations to other things. They will be learned in the physical sciences. Elihu Burritt had perceptive intellect almost to deformity. He was learned in things, and in things which happened before he was born. There is a wide difference between a clever man and a profound man. The acquisition of facts makes us clever; to reason upon them correctly makes us profound.

I know men of profound reasoning powers who have not knowledge of facts sufficient to give them common sense, so deficient is their perceptive intellect. A German of fine education and rare powers of reasoning once applied to me for assistance. I was not able to obtain a situation for him, and by way of experiment I let him take a book, which we readily sold for a dollar, and told him if he would sell it he should have one-half. He spent two days in a fruitless effort to sell that book. He had not business talent enough to present the merits of the volume in a way to induce anyone to make the purchase.

To be great is to be balanced. Melanchthon was a truly great man—a man who made an impression upon his age. He was largely and equally developed in the perceptive and in the reasoning faculties. The man who is truly great is so in every sense of the word. He must be equally developed in the moral, intellectual, social, and selfish faculties. Each of these, as a whole, must be well developed to make a truly great man. Without this complete development he will be lacking in some of the relations he sustains in that perfect consciousness with reference to all subjects and questions which is necessary to make him truly great. This complete development gives a man common sense and philosophy. The great end of education is to produce this balance of power. Some faculties are too much developed, others too little, and, therefore, we need to encourage some and repress others. But this is not the order of the day. It is generally supposed that the true course is “to follow genius,” and that if we did as I propose we should have no distinct characters. Yet is it not better to have twelve perfect men than to have twelve imperfect men? To have twelve whose faculties are all well developed than to have twelve with only one faculty well developed? Perfection was Christ’s doctrine; and we

ought to do all in our power to attain it. We should teach our children to do everything, so far as possible, that is necessary to be done to supply their wants. The man or the woman who can do only one thing is not fitted for self-protection and care if thrown out upon the world on their own resources.

What if I only knew how to judge of heads? What would be my condition if from any cause compelled to abandon that? But if I know how to hoe corn, to raise stock, to do any sort of mechanical work, my resources are far greater, and I am better prepared for usefulness and for emergencies. A man who can do only one thing is very much in the situation of one whose muscles might be adapted only to walking straight ahead. The moment it is necessary for him to turn to one side or the other he is powerless. Nature has given a variety of talent which should be cultivated.

I shall now proceed to a consideration of the faculties composing the perceptive intellect. When I have analysed a faculty I shall leave it for the reader to infer that it ought to be cultivated. Phrenology has already greatly improved education; and it is destined to fully accomplish the work which is only begun.

Individuality is the first faculty I shall notice. It is the lower and central organ or the frontal lobe. The mere sense of things is the function of this faculty. It is the first exercised by the infant. It sees the light, and its attention is attracted by it. It next knows voices, and so on. The office of the faculty is to observe things. This is the beginning of mental manifestations. A man with it inordinately large, and other faculties moderate, is a regular starrer, his mouth and eyes open; he sees everything. It is this faculty which makes children huddle together when anything happens, or anything new is produced, and say "Let us see it!"

Persons with small Individuality, large Imagination, large Language, and ardent temperament, tell large stories; they have not a clear and distinct perception of the real facts. I knew a little girl of this organisation who once called her mother to the window to "see a whole lot of horses and carriages going along the street." The mother came, and found one horse and a carriage containing two persons. The girl saw them, and the effect upon her imagination was such that she seemed to see all she represented, and did not make the statement to deceive her mother.

Children can be taught to observe facts. It is important. Some have justly the reputation of being extravagant, because their perceptivity is not sufficient to give tangibility to their

ideas. They call a dozen persons a "house full," although at the same time they do not mean to tell a lie. Always make sure your child sees a thing. Teachers will wear their lungs out in explaining to children how a thing looks, when its exhibition would be so much easier and so much better. Describe a thing to children, and no two will draw it alike. But show it to them, and call their attention to all its particular parts, and they will all draw alike.

This is the telegraphic way of education. Instead of wearing out your lungs in description, place things before them, let them see, and then they will work it out in their own brain. Before phrenology we had nothing hanging about school rooms. Now, in many instances, the walls are covered with proper objects for the attention and study of children. Their Individuality is thereby constantly exercised.

Form gives width between the eyes. This faculty gives the idea of shape. There are no two things alike, and this faculty distinguishes the differences in form. By this we know the form of the countenances of our friends. We know pears, apples, potatoes, wheat, corn, &c., by their shape and general outline, and recognise each distinctly. We can tell all persons of our acquaintance one from the other by their features. They all differ, each from all the rest, and the endless variety of the form and expression of the human face upon so small a scale, is one of the greatest wonders of nature.

A man lived in Boston whose organ of Form was so small that he did not half the time know his wife when he met her in the street. He would go into the street to dun Mr. Smith; would meet him, and ask him where Mr. Smith was, and Smith, knowing what was in the wind, would direct him wrong. We often spell words by their form as we tell the letters of which they are composed.

Cultivate this faculty in children as it should be, and all our sitting-rooms and parlours would be adorned with beautiful drawings, which would be the pride and delight of families, and exert an excellent influence upon the character and feelings of all. If we would only cultivate Form, Size, Constructiveness, and Imitation in our children they would draw faces of all our friends, and every variety of beautiful and interesting objects in nature and art. The truth is, children do not learn one quarter what they might if the primitive method of educating the faculties were followed out.

Size is situated at the corner of the eye—the next above Form. This faculty gives us the power to recognise size; we could do nothing as to size without it. An artist without it

might paint the eyes in a picture as large as fists, and the hand as large as the foot. It can easily be cultivated in children too young to study books. Let them take a slate, and make copies of the same size, others half as large, &c. Let them guess at the middle of a stick, or of a bench. Some persons can tell, within a quarter of an inch, the middle of a bench or a stick several feet in length. This faculty enables them to do it.

Weight is situated a little outward of Size. One law of things is gravity, which draws objects towards the larger body. Things are held together because of this law. In some things the power of cohesion is greater than in others. This faculty recognizes the gravity and solidity of objects. Mechanics require its constant exercise. It enables us to maintain an erect posture in walking, by keeping our balance. It is astonishing what some can do. A juggler will twirl a dozen plates at once on the end of sticks, and balance them all; twirl a plate on one end of a stick, the other on his chin; walk the rope; dance on a wire; sit down in a chair on a rope; keep half a dozen balls in motion, &c., &c.

We do not teach our children to walk as we ought to do. Parents will not let their child creep upstairs when it makes the attempt.

The faculty must be instructed. You can as easily teach a child of two years old to handle a tumbler without breaking it, as one of six, and you will have to teach it at six if you do not before. It must be taught before it will do it well. Not to teach it, by exercise of the faculty, is about as sensible as the good old grandmother who charged her grandson never to go near the water till he had learned to swim!

Physical education should bring out a greater variety of physical motions. For this reason I encourage dancing. I would have it taught as other things are taught; let it come along with other branches of education, and not a thing apart, only for a few. It would tend to perfect education, which is the development of mind and body, as a whole. Take this course, and the dissipation which now attends dancing, the late hours, would soon be done away with.

Colour is situate near the outer corner of the eye-brow. When full the arch of the eye-brow is elevated. It gives us the power to distinguish colours. Some persons are so deficient that they cannot tell a ripe strawberry from a green one, except that the ripe one is soft. We cannot fully explain this total loss, which is rare, while its deficiency is more common. Those in whom it is deficient fail to appreciate the beauty of colours; and they are deprived of more than half

the charms of animated nature. It is not cultivated in our schools, notwithstanding it is the first thing which attracts the eye of the child. What sort of an education is this? A person in whom this faculty is deficient cannot appreciate nature as one in whom it is well developed.

Order is next outward from Colour. When large it gives prominence to the outer corner of the eyebrow.

It is a fact now, as much as it ever was, that Order is Heaven's first law. In Franklin the faculty was very large, and it contributed greatly to his success. This faculty is not cultivated as it should be. The school-boy who has it large keeps his books clean and neat, and lays them away in the drawer when school is over, and does not tear and soil them, and tumble them in. A boy with small Order and large Destructiveness will always be tearing his book, defacing his desk, and doing similar mischief. Order will not be developed as it should be until parents *see* that their children take care of things.

Some do not appear to know that we can teach children to be neat. How often do mothers fly about the house and "put things to rights" when they see someone coming. They let their children throw things about, and keep the room in the utmost disorder, instead of requiring them to have everything in its proper place. Give a child to understand that it cannot have a plaything unless it will put it away. But some parents do not provide a shelf or hooks for the garments of the child, nor a box or drawer for its playthings. Those who have this faculty large are more successful than those who do not.

I knew a boy in Rhode Island, whose father was a shoemaker, and who had small Order and large Destructiveness. When I was in the shop, the boy went to the bench, took an awl, and went to scratching the best furniture with it. The father did not see any of this till done. I saw it. He told the boy, in an angry tone, to bring back the awl, and he did. Soon the father pulled out a drawer of pegs, took a handful, and let the drawer be open. The boy took out a few handfuls, and scattered them all over the floor. The father did not see that, either, till all the mischief was done. I saw him take them out; and I afterwards saw him take his mother's comb from her cap, throw it on the floor, and break it. She knew nothing of it until it was all done.

Now the evil is, parents do not pay attention enough to the doings of their children. They allow them to do such things and then punish them. But you should know that children will do these things, and therefore you should prevent them.

Some parents seem to think their best furniture must be scratched up by children. There is no need of this being done the second time, by any child. Order, as a rule, is larger in women than in men, and they are generally neater.

Approbativeness large induces a display in dress, an external neatness, while in the house is all disorder and confusion. It is not enough that we make a show of neatness and order in externals. Young men sometimes make sad mistakes from this cause; they always find a young lady neat, when they meet her from time to time in the parlour, that they are led to suppose that she is a pattern of orderliness and method. Let them study phrenology—that will tell them whether she is neat or not.

Calculation is situate at the extreme of the eyebrow, and continues down, as though it were going to the ear. If large, it gives the head, in this region, a broad appearance. This faculty has to do with numbers, as such, but not with mathematics. There are persons good in mathematics who are poor in figures, and *vice versa*. Skill in mathematics depends upon other faculties.

Language gives fulness under the eyes. It is very large in the head of Charles Dickens. Language gives the power of conversation—of communicating our ideas to others.

This faculty does not give us the ability to learn other languages—only to talk our own. The ability to acquire other languages than our own depends upon other faculties, combined with this. A child brought up with Germans, will talk German; with French, French; with English, English; with the Italians, Italian. We all learn to talk; and the child will learn to talk the language it hears, whatever that may be. And if the child hears low, vulgar, coarse, inelegant language, it will learn to use that language, and will use it. And if chaste, pure, elegant, elevated conversation, the child will imbibe the same taste. It behoves parents to take care of the manner and substance of what they say before their children, and it also is clear that the silly, nonsensical stuff talked to children is not only very silly, but equally injurious. Children will talk as they hear others talk. Parents and others are constantly educating this faculty in children by their conversation.

To be able to speak easily, elegantly, and correctly, is a valuable power. If there are young men who wish to acquire this power, they must speak; they must form debating societies, and go at it, no matter how many blunders they make. They will soon come to excel those who laugh at them. Attend religious meetings, and speak there, utter your

thoughts and sentiments. Express your ideas on as great a variety of subjects as possible. Learn to give utterance to all your ideas.

Language should be cultivated in connection with memory, so that we can at any time tell anything we know. How many men there are who know a great deal which would be of great service to the community, if they had only cultivated the power to communicate it. Much is thus lost to mankind. The treasure is there, but to all the rest of mankind it is a sealed book. They derive no advantage from the experience and the acquirements, and the reasoning of such men.

Children and youth should be encouraged to talk. The old idea was that "children should have eyes, and ears, and no tongue." The faculty cannot be cultivated in that way. Children must talk, and must be guided in their talk and conversation, if they are to become expert in the use of language.

Women have the faculty in a higher degree than men. They are greater talkers than men. They have stronger social feeling, which leads to the exercise of this faculty; they are in society more; they talk more to children. Women are more eloquent than men. Men are engaged in business, in thought, and depress the faculty by want of exercise; while women, by exercising the faculty, are constantly strengthening it.

L. N. F.

LECTURES ON PHRENOLOGY.

BY DR. SPURZHEIM.

LECTURE XI.

We are now arrived at the consideration of the forehead, and no one can be more convinced of the necessity of the brain than myself to the manifestations of the mind. It is a common opinion that the intellectual powers depend on it; but I confess that I feel more difficulty, by far more difficulty, in showing that, than I have in showing that its existence is necessary for the manifestation of the powers called feelings. I would not advise you to begin the study of phrenology with the intellectual region, for there are difficulties upon difficulties in the forehead.

SIZE.

We have already seen that foreheads are very different in their general size. Now as to the size of the forehead, we must make some reflections. The size alone is not the cause

of the greater activity, it is only one of the conditions. In speaking of the intellectual powers, we have to consider the influence of the constitution, seeing that with foreheads of equal size, one individual will have powers more active than another. But we come now to the most immediate difficulty, which is to ascertain correctly the size of the forehead ; not only is it difficult to judge of the different degrees of activity, but it is extremely difficult to ascertain the size of the development of the forehead. Now you would find that persons beginning with phrenology would say this is a fine forehead (showing one nearly perpendicular, but not very prominent), but a person of more knowledge would say, "It is very indifferent." Here is another ; it is covered, as you see, with hair, and it seems a good forehead (showing a model), but is it so really ? It appears large, but you might be deceived by such a forehead. Now if you reflect on what I have said on the divisions of the head, you will discover whether it is a good or bad forehead. I divided the head vertically into two regions, the one anterior, the other posterior to the ear ; beginning then from the ear, see whether the greatest mass of brain lies anterior to it, or posterior ; draw a line from the ear to the centre of the forehead, and see whether the radius is long from that centre. You see, in the model I have just spoken of, the distance is nothing, although it appears at first sight a good forehead.*

Therefore, in examining the size of the forehead, do not be satisfied with taking a front view of it, but see it also in profile, and observe whether the whole mass comes out. Moreover, in the forehead in general you will find that the lower portion is commonly more developed than the upper. In consequence of the greater development of the lower part of the forehead, the whole may present a declivity, and you might be deceived by that, and say it is a bad forehead, when, in fact, it might be a very good forehead. (Two engravings of an oblique and perpendicular forehead were shown.) Now a beginner seeing them would say, "The straight forehead is the best, there can be no doubt of that ;" but if he were to take a compass and measure the two, he would find that the greater development of brain from the ear would be found in the oblique forehead in this instance ; so that you must examine the size in all its dimensions. Examine not only the surface or the front, but whether from the ear the cerebral mass comes out, and if you see a person with a reclining forehead, that may be caused by the greater projection of the lower than the upper part, and

* See p. 449 PHRENOLOGICAL MAGAZINE for 1881.

yet the upper part may be well developed. This, then, is one difficulty ; and we now come to another.

The organs situated here are all small, and we have some difficulty to distinguish one power from another, as the powers are numerous. If we take the posterior part of the head, we have there merely three powers occupying a large mass of brain double the size of the forehead, and yet we divide the forehead into fourteen parts. This division, or arrangement, is not arbitrary, as some persons suppose, but is, such as is indicated by nature. We observe that certain feelings are combined with larger masses of brain than others. If the individual organs be large here (the forehead), it is easy to distinguish them, but it is not so easy where they are small. Every person may have powers enough to be a useful member of society, and yet not enough to constitute him a genius. Everyone may have faculties enough to exercise his profession, but very few will be able to say, "I have a great genius." A man may understand mathematics without becoming a Newton ; another may be able to put colours together without becoming a Titian. Great talents are rare ; but if you find an individual who excels in any branch of the arts or sciences, you will find a great development of the brain hereabout.

Then, again, there are parts in the middle line extending also to the right and left, called the *frontal sinuses*, and these present another difficulty in the study of the forehead. The frontal sinuses are cavities situated above the root of the nose, between the external and internal tables of the skull, and communicate inferiorly with the upper part of the nasal passages. We know that these hollows or cavities exist, and therefore we do not mistake them for brain. Then, again, there is a space between the eyes, and the brain occupies that space as well as behind and above the eyes. Hence, if we wish to know the correct development of the anterior lobes, which are situated in this part of the head, we must take all these circumstances into account. There are difficulties to overcome, for which study is required, and, therefore, I would not advise a phrenologist to begin with this part, no more than a musician would advise his pupil to begin to play Handel or Mozart. If blunders are to be made, I am sure that they are more likely to happen with regard to the intellectual parts than the others, and, therefore, I should advise you to begin with the study of the posterior parts. But let us see how far we can overcome these difficulties.

The understanding of man is very complicated ; we cannot examine the functions of the brain here according to the doc-

trines of the schools of philosophy ; we shall find no organs of attention, of memory, of judgment, of imagination. All these things exist ; there is attention, there is memory, there is judgment, there is imagination. As phrenologists, we do not deny any of them, but we maintain that these manifestations are not primitive ; hence we cannot speak of organs of such manifestations ; they have been looked for, but never could be found. Dr. Gall spoke of certain talents in the same way that he spoke of certain actions in the feelings, and as there are great poets, and musicians, and mathematicians, and metaphysicians, and as he found these great talents to exist, he spoke of organs of music, and poetry, and mathematics, &c. ; but must we admit that there are organs for all

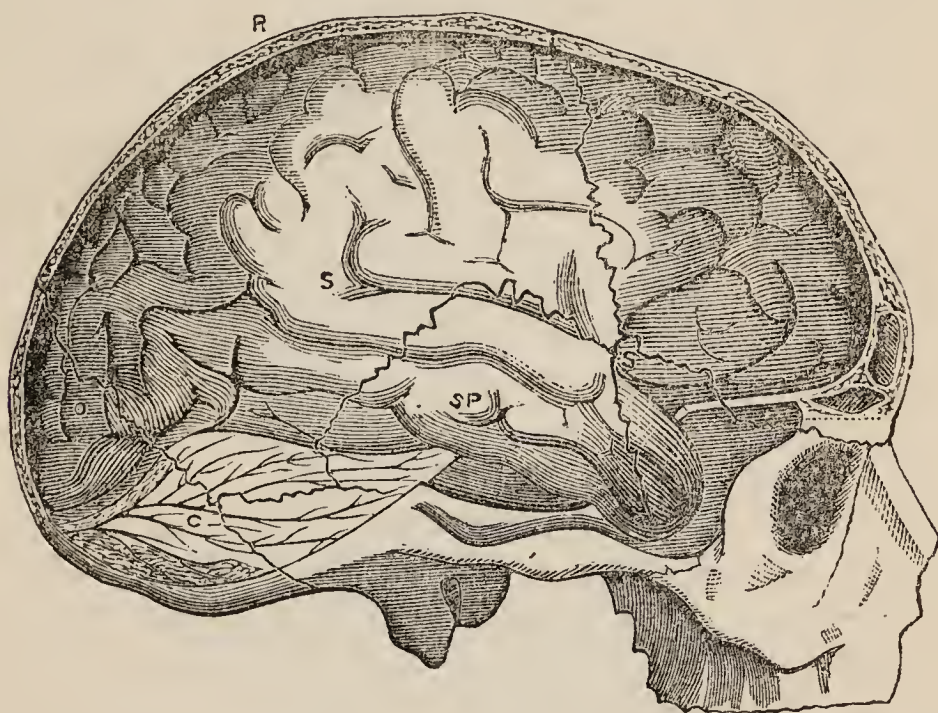


Diagram showing the brain and skull, with the frontal sinuses.

these, or are these manifestations the results of a combination of several powers ?

My mode of judging is this : it seems to me that the mind acquires a knowledge of the external world, of external beings, then of the physical qualities of the objects, and of their respective relations, and, in the end, reflects and reasons upon them, and has knowledge ; so that I think there are certain fundamental powers by which the mind acquires a knowledge of individual beings, and of their qualities. The organs which give these powers are placed just above the root of the nose, whilst the power by which the mind acquires a knowledge of the relations of objects, appears to me to be placed a little higher up, and I think if you reflect on them, you will be satisfied that they are so placed. Before, then, you proceed

to the investigation of the talents situated in the forehead, ascertain how far it is projecting, how far it is broad, and then see the individual development of the parts, and you will find, in a general way, that the lower part is much more projecting than the upper, especially will it be so in those who have the power of modelling and judging of size.

Let us see what are the individual powers attached to this portion of the brain, and see if these powers are not more active in some than in others? Now as to the configuration of the lower part of the forehead, only look at the situation and direction of the eyebrows, and you will be astonished at the varieties which they present; so great are the varieties, that any individual who would pay attention would soon be able to distinguish and recognise persons by the configurations of the eyebrows, as we now commonly do by the appearances of the nose, eyes, and lips. It is really astonishing, this variety of appearance. When I look round on the persons here, I see that some individuals have the eyebrows drawn up, in others they are quite the reverse; some, again, are quite horizontal, some arched externally, some depressed externally, and so they have various directions.

Confining the attention merely to the configuration of the forehead, and after having noticed the great varieties of the eyebrows, regard next the distance between the eyes, and you will observe that in some the nose is very broad, in others very narrow; in some the part above, and at the root of the nose, will be prominent, in others quite depressed; only pay a little attention, and you will soon be convinced that there is a great difference also in this respect. Go to the eyes, and you will see that some individuals have the eyes much closer to each other than other persons; the eyes will be prominent in some, sunk and depressed in others; some having the space between the eyes broad, and the eyes themselves very much pushed out; and this peculiarity prevails even in nations; the French nation is more developed here than the German, and the greater number of English have the space narrower between the eyes and nose than the French. Take only the two capitals, London and Paris, and you will find that many more French have the distance greater between the root of the nose and the eye than the English. Some have the parts above the eyebrows quite depressed, and in others the parts project just as much.

INDIVIDUALITY.

I would say that those who are very broad between the eyes will see things much sooner than those who are narrower there. Every artist, who has exercised the organs of Form

and Size, will distinguish objects more correctly and quicker than those who have not exercised those organs. Those who have exercised these powers have a great facility in acquiring a knowledge of the physical qualities of the things around them. First, then, we acquire a knowledge of the existence of objects by individuality, as I call the power, the power by which the mind acquires a knowledge of the existence of beings. Some have denied even the existence of beings, as you know ; but I would not do myself the honour of speaking here if there were no beings around me. Now there are some individuals who are very fond of natural history, even from childhood, who like to know plants, animals, minerals, indeed all things around them, and you will see that they have a greater fulness between the eyes than those who show no such



All the perceptive faculties large, Calculation and Locality especially large.

desires. This is a power which is sometimes very active and produces errors, as happens in the feelings where they are too active and go alone. Some persons have great difficulty in distinguishing between *entia*, or the mere existence of beings, and *phenomena*, or the actions of beings or events. There is a great difference between them, yet we know that even in the medical art it is very common to speak of insanity as a being, and we speak of many other functions as agents instead of events ; they have been personified, so to say, and individuals, who have a great tendency to personify phenomena, have this power strong—Individuality. Look at those who are fond of natural history, who excel in botany, geology, and so on, and you will find them broad here.

FORM.

Next we acquire a knowledge of the forms of objects ; there are persons who have great talent and taste in forms, and others who are almost insensible to form. It is certain that you will find a greater number among the French, as a nation, who are extremely sensible of form, than among the English ; and whatever the French artists take in hand they finish. This form is essential to portrait painters ; it is the power which gives them an inclination to finish well. I do not mean to say but that the English portrait painters can finish as well as the French, but if they see that the public do not value the finishing of the painting, and are content with what is called a good likeness, they will not finish. Look to the works of art in common life, and the French workmen will be found superior in this respect ; they finish what they take in hand better than the workmen of this country. It is a power also essential to architects ; you will find that all those persons who excel as architects are broad here. Observe the Italians, and you will find this organ much developed in them ; it is essential to sculpture, and the organ which belongs to form and configuration is placed between the internal angles of the eyes ; the cerebral parts placed on both sides of the optic nerve push the eyes outward. Look at the cast of Raphael, and you will see that the space on each side of the middle line passing down the forehead to the root of the nose between the eyes is very great.

There is more difficulty in ascertaining the development of this organ in adults than in children, on account of the frontal sinuses, as I have before explained. This individual power may be very active and yet act imperfectly, just in the same way as happens to a person who likes colours, and yet has not a taste for colours. There are others who have a taste for music, but have no judgment of it ; persons may have great intellectual powers, and yet want judgment ; so a person may be disposed to look for form, and yet not have a good judgment of forms. Judgment refers to the mode of acting, it is not the power ; power may be active, and if it act in a certain way, then we say there is judgment.

SIZE.

Above Form we admit the organ of Size to be placed. An artist may have made a form, and when you look at it you see there is no proportion.

COLOUR.

There are individuals who have natural taste for colouring ; if you ask them whether it depends upon any will of theirs to

place colours together, they will answer, No. There are others who will put colours together, but they never harmonise. We observe that some ladies are good judges of colour, and when they dress they choose such colours as harmonise; and there are others who will dress in all the colours of the rainbow, and yet never get the colours to harmonise; the more colours the better are they pleased. Look at those who excel in colour, and you will find the eyebrows arched upwards. Look at this picture of Rubens, and you will see how the eyebrows go up, quite curved. You will find that all those who have displayed taste in colouring have this part of the brain more developed than others who have no taste. I can give you this part as quite certain. Sometimes persons cannot distinguish even one colour from another, and what is very peculiar, the greater number of persons who mistake one colour for another, cannot distinguish red from brown.

There is a gentleman in Dublin fond of drawing, and he would have been fond of colouring, although he might not have equalled Claude, but he could not distinguish colours, and he painted a tree red instead of green. There was a gentleman at Edinburgh who could not distinguish red from green. I knew a female who could only distinguish white from black, all the intermediate colours appeared either as one or the other. The case of Ottley, in Dublin, I suppose you are acquainted with; he could only distinguish the shades of green and red; if you placed before him a dark-green and a light-red, he could distinguish one from the other as differing in shade; but if you placed a dark-green and a dark-red together, he could perceive no difference; he would say the colour is the same. He would say, "I receive one impression from the dark-red and the dark-green, and another impression from the light-red and the light-green, but the species of impression is the same, the only difference is the shade." Sometimes this defect runs through a family. I know a family on the Continent, all the males of which labour under this defect, and the girls can distinguish all the colours perfectly well. In judging of the powers situated hereabout, there is the difficulty of the frontal sinuses to overcome; but they do not interfere with the organ of colouring, although they do a little with Individuality and Size. Now if you find such a sharp ridge as there is here (showing a model), you may suspect that the projection is owing to the frontal sinuses. You should begin early in life to observe accurately these powers, and you will find some children of eight, ten, or twelve years of age, who will recollect persons after having only seen them

once; and in such you may expect to find Individuality strong.

Others begin to draw very early, and you may observe the organisation in children without any fear of being misled by the frontal sinuses, but about fourteen, sixteen, and twenty they begin to form. In very advanced age, and sometimes from disease, it appears that the whole forehead is hollow. I have seen a skull in which the separation between the external and internal tables was about an inch. Children are very attentive to the beings around them; they wish to know every thing, every plant, animal, and so on; but there comes an age when things around us possess less interest; we think we are already sufficiently acquainted, and our anxiety to know things is removed. When I hear a person say "I had a good memory once, I could learn by heart very well, but my memory now goes away by degrees," then I think the frontal sinuses are developed; but we need not wait for old age, or study the powers of the mind in a diseased condition of the parts. Let us still consider a few organs hereabout, because I wish to give some further remarks upon the powers placed around the orbit. I have spoken of Individuality in the middle line, low down between the eyes, then of the organisation destined to form or configuration. Here, again, toward the middle of the eyebrow, is the organ of Colour, so that if the space be large between the eye and eyebrow, I should say the organ of colour is well developed. Whenever you see the eyebrow more drawn up toward the external than the internal angle, you may be sure of this power.

ORDER.

If we come to the external angle of the orbit, we observe a great difference between the English and French; the French are generally less broad between Colour and the external angle than the English. Again, compare the Irish and English, and you will find the English much broader here, between Colour and the external angle. By experience I have found out that this is the part connected with order and arrangement. Some children are very much disposed to set every thing in its place, whether toys, articles of dress, or furniture, and there are others who are fond of scattering everything about in most "admired disorder;" now the first of these will show the organ full. I have known some ladies who were quite disturbed if they saw a spoon or a knife out of its place at table, or if a chair was out of its place in a room, and you may depend always on finding the organ well developed in such persons.

At the external angle of the orbit is the organ of Calculation. Here is the cast of a little boy, who, without any education, displayed great power of calculating, and you must observe how much this part of the brain is developed. The fulness of this cerebral part commonly elongates the brow and deepens the external angle; whenever I find the external angle deeper than the internal, then I admit that the organ of Calculation is large. Look at all great mathematicians, and you will find that they have it large; but this power is destined merely to calculate, not to give the knowledge of the principles of mathematics, no more than size alone can give a man a good knowledge of geometry, or the perception of colour make a good painter. All those who are full here, externally, at the external part of the orbit, have a talent for calculation. This deepening of the external angle gives a person a dark look, a thoughtful, designing look, whilst painters and poets have a great hilarity of look; mathematicians, on the contrary, have a grave, sombre appearance, because the eye is covered by the external angle of the orbit.

LOCALITY.

We now come to the middle part of the forehead, and if you see great breadth here, it indicates the form of objects, and a little above this is the organ called Locality. Some persons show a very strong local memory: they remember every place they have seen, and others can never find their way. Some animals manifest the greatest power of knowing places; animals have been brought from Liverpool to London by water, and yet found their way back to Liverpool again by land. Pigeons have been taken in sacks to great distances, and have yet found their way home: and some have called this power a sixth sense. A dog was taken from Lyons to Marseilles, and from Marseilles to Italy by water, and yet it found its way back through Italy to Lyons. There are individuals fond of scenery; they are fond of travelling, fond of seeing countries, and they sacrifice many comforts in order to satisfy that inclination, whilst others, if they travel, fall asleep in their carriages. Amongst artists there are many who show themselves most attached to scenery, and prefer landscapes to portraits. This power of great local memory was noticed by the Jesuits at that period when they were made the guardians of education; they observed that some children manifested strong local memories, and others had very weak ones. The knowledge of places, and the talent of judging of their relative situations, belong to this one fundamental power, and the organisation is placed hereabout, a

little above Size.* If I find an individual who has this part very full, I am sure that he is fond of travelling. If you know an individual who would recollect where a book is placed in a large library, and who could go into the library and fetch it, even in the dark, you will find this organ of local memory strong in him. It is somewhat difficult to separate the organ from the eyebrows, but it is placed a little higher up. Such persons as have this organ full are fond of scenery, have a great inclination to travel, and, if painters, they are fond of landscapes ; you will find the power active in such persons, and it gives local memory.

BRAIN DISEASE AND CRIME.

Several recent cases of crime have directed public attention, perhaps more than it has ever been directed before, to the question of brain disease as a factor in the commission of crime. Anyone acquainted with phrenological literature will readily call to mind reported cases in which criminal acts have been clearly traced to disease of the brain, and the surprise is that medical men, who make pretence to know so much about the brain and its action, and who pooh-pooh the opinions and investigations of those outside their charmed circle, should not have investigated the matter more thoroughly and give the world the benefit of their experience. That some inkling of the truth has struck the minds of the faculty is evident from a letter which was published in the columns of a contemporary, and to which we call the attention of those who are, as a class, the foremost to decry phrenology, and who yet seem to be the most at variance among themselves as to the functions of the brain. The letter is as follows :—

“ Sir,—Some years ago, when I was acting as post-mortem clerk at one of our Metropolitan hospitals, I was discussing with the Professor of Pathology the causes that lead men to commit crimes or act in remarkably unusual ways. My teacher was an earnest investigator of mental disease, and he assured me it was his firm conviction, the result of long experience, that no one committed great crimes or acted strangely on sudden impulse except as the result of some brain lesion, more or less obscure, and difficult pathologically to demonstrate. At that moment I was about to open the head of a

* It extends a little upward and outward of Size, more above Weight.

man on whom an autopsy was ordered by the Coroner. I said to the Professor, 'This man attempted to kill his wife in a paroxysm of rage. He struck her with a poker, and she summoned him before a police magistrate. On the eve of the appearance of the summons, he cut his throat. I am now about to dissect his brain, and I ask incredulously, "Shall I find here the cause of his crime?"' My teacher calmly replied, 'I cannot say that we shall be able to discover it; but it is there—proceed.' I carefully removed the brain, and on making a section through the right hemisphere I came upon a large abscess. 'Now,' said the Professor triumphantly, 'you behold the cause of this man's erring conduct.' Since then I have often had cause to remember this circumstance, and it has helped me to a kinder and more tender view of the faults of my fellow men.

"The whole history of Lefroy; his strange behaviour throughout; his refusal to allow the only plea that could have really saved him to be made in his defence; his persistent habit of lying and deception; his absurd vanity, all tend, in my mind, to indicate him of unsound mind, and I solemnly believe he was, on the fatal day in question, the subject of an attack of homicidal mania, and, consequently, should not be executed."

Professor Benedikt, of Vienna, has written a book on the constitution of the brains of criminals, in which he endeavours to show that they are the subjects of special cerebral malformation. We may have occasion to call special attention to this work; meanwhile it is simply our desire to indicate where the medical faculty seem to be at fault, and where phrenology is capable of affording a reasonable explanation of the criminal acts which are apparently inexplicable by any other hypothesis, unless it be that of demoniacal possession.

IN HIDING.

It was on that fine edge of night which goes by the name of morning to those early risers whose day ends at sunset and begins before cockcrow, that Mrs. Ann Dustin, rising from her virtuous slumbers, addressed herself to the task of fire-making. Why Mrs. Dustin should awake at such an untimely hour it would have been hard to explain. Dustin, her late husband, was "late" only in a conventional sense, having died years before. It was not for the sake of neighbours; for neighbours there were none within three-quarters of a mile. There was nothing cheerful in the raw November

darkness, lit only by the twinkle of the distant light-house. Nobody needed, no one waited for her. Had she chosen to lie in bed till noon, not a voice would have been raised in protest, and truly "Heaven sends nuts to those who have no teeth"; for all this charm of privilege which certain lazy people would so have valued, was utterly thrown away upon her. Punctual as the clock, at four in summer and five in winter, anticipating the earliest hint of dawn, up rose Mrs. Dustin, and from that time forward the wheels of her dress drove busily on till sunset, when she went to bed, thus saving fire, candle, and the infraction of old custom.

She had just got her fire under way when a knock fell upon the door. Knocks have character. This was not loud, but quick, imperative, as given by one whose errand might not brook delay.

"Come in," said Mrs. Dustin, surprised, but calm. Then recollecting that the door was still fastened, she stepped forward, drew the bolt, and opened.

Three figures stood without, dimly defined against the darkness of the morning.

"Oh, Mrs. Dustin," said a voice, "may we come in? we are hiding."

On the mainland such statement might have sounded odd and startling enough, but to Mrs. Dustin, a Nantucket woman born and bred, it had a different significance. She was familiar with the island custom known as "hiding parties," when a certain number of girls and young men, having a dance in contemplation, settle who shall give and who pay for it by a preliminary game of hide-and-seek. Twelve hours of the day, from six to six, are allowed the latter to discover the lurking places to which, before dawn, the former have betaken themselves. It is an exciting game, as may be imagined, with a whole island to range over, the forfeit an equally pleasant one to pay or win, a spice of adventure involved; so it is no wonder that it should prove popular, and girls be willing to shorten their beauty sleep for the fun of indulging in it. Mrs. Ann had been to many a hiding party in her time, and knew all about them; so with ready wit she hurried the girls inside, shut the door, lest some flash of light should go forth to guide the seekers, and proceeded to discuss ways and means.

"'Tain't no use in your trying to stow away in none of my rooms," she said. "The boys'll be all over them like a flash. 'Taint the first time they've come here. Once they caught Mandy Pike behind the flour barrel in the buttery; and another time Lucy Smith she got in under the shelf of my

closet, and I set the tea-chest, with my best bonnet in it, right afore her; but, law! Jack Sperry he's as quick as an eel, and he had the chest and the bonnet, and Lucy atop of them, all out on the floor before you could say 'scat.' Hark! what's that?" as another knock, hesitating, but vigorous, fell on the door.

"Who's there?" softly stealing forward and slipping the bolt.

"Any girls in there, Mrs. Dustin?"

"Well, I declare, if that foolish custom ain't going the rounds yet, I want to know!" replied Mrs. Ann, at the top of her voice, signing the tittering girls to silence meanwhile. "I call it hard if quiet folks can't get their "chores" done up at this time of mornin' without your coming round like this. It ain't six neither. You'd ought to be ashamed of yourself, Mark Coffin—I declare you had."

"'Tain't six—that's a fact," said one of the young fellows. "Come along, boys; Mrs. Dustin's right. See you later." With this and a laugh they walked away.

"Now, girls, set right down by the fire, and let's think what to do," said their hostess. "That Mark Coffin's a regular high-flier for spirits. Did you hear him laugh? Draw up closer, Miney. You'd better; you look half froze."

Miney or Jessamine, obeyed with a little shiver. She was a delicate, pretty creature, with fair hair and sweet blue eyes, and looked quite unfit for the exposure and chill of the early walk.

"How'll we manage?" pursued Mrs. Ann. "There's the cellar; that's the thing. I'll fix you up there. It'll just hold you, and the boys won't be likely to suspect, 'cause there wa'n't none till last summer. I had it dug in June.

Cellars, be it known, are not the customary and matter-of-course thing in Nantucket as elsewhere. Many houses dispense with them altogether; in others the cellar is merely a small pit or cave dug beneath the kitchen for the storage of butter and other perishable commodities, while the walls of the house rest upon the ground, or on piles connected by a lattice work. Mrs. Dustin's low-bowed cottage was of the former description.

A trap-door and ladder led to the cellar, which was about eight feet square. Lifting the trap, Mrs. Dustin now commenced to line the space with feather-beds hastily brought down from the second story. Various quilts, comforters, and a couple of buffalo-robcs were tumbled in, a hasty jorum of tea was brewed, and fortified thus by warmth and food, the girls descended the ladder, well wrapped in blankets, and couched, a laughing heap, in the billows of the friendly feather

beds. Mrs. Dustin saw them well established, then with a nod reclosed the door, drew a square of carpet over it, set her sewing-machine thereon, hastily cleared away teacups and plates, brightened the fire, washed her hands, unbolted the door, sat down, and began to stitch vigorously. As she did so, she glanced at the clock. It was exactly six.

Half a second after came another quick knock, and without waiting for answer, the door was dashed open, and three young men hurried in, and with a rapid "Excuse me, Mrs. Dustin, we're after those girls," spread themselves over the premises with a rapidity and thoroughness born of long practice. Mark Coffin, a handsome fellow, with a daring glint of fun in his eyes, hurried to the attic. Sam Mayhew ransacked the buttery, and opened all the cupboard doors, while Issacher, or "Czar" Pike dived into the secret recesses of Mrs. Dustin's own bedroom. Ten minutes sufficed to ransack the small house; each bedroom was searched, every closet, the dresses on the wall were shaken and pounded; the logs of the wood-pile dislodged and thrown aside; Sam even lifted the lid off the churn and peeped within. All was vain, and the discomfited searchers returned to the kitchen, where the mistress of the house still plied her whirring treadle, and slipped the long white seam beneath the glancing needle. She looked up as they entered, and remarked, dryly, "I hope you're satisfied, and you'll please pile that wood up again just where you found it."

"Yes'm, we have. Why didn't you let us in when we first came?"

"'Cause 'twasn't six."

At that moment Mrs. Dustin's quick eye perceived that "Czar's" big foot had turned up a corner of the carpet, thus leaving visible one hinge of the cellar door. With a rapid movement of her own she replaced it, still sewing steadily on, and fixing, as it were, the gaze of her visitors, while she added: "Old ways is old ways. There's a difference of opinion how good they be, but if six is the hour, I keep to six; so it ain't no use coming a-knocking at my door at twenty minutes past five, and that you fellows can remember another time."

"Well, that's no more than fair," declared Sam Mayhew, with a laugh. The three stood debating for a moment, then, "Come on, we'd better try the houses down to Trot Hills next," said "Czar." They moved towards the door, and Mrs. Dustin watched them with secret satisfaction. On the very threshold the astute Mark paused and queried, "Has this house got a round cellar to it?"

Mrs. Ann's heart stood still for the space of one second, then her answer came readily and bold, "*No, it hain't.*" "And no lie either," as she afterwards explained, "'cause the cellar was square."

Another pause, then "Come along." The gate clicked, they were actually gone; and after a few minutes' delay, to make sure, Mrs. Dustin pounded cheerily on the trap, and called "All safe girls," to which a burst of laughter responded from below.

There was no question of leaving the cellar, all concerned were too wary for that; and this prudence was justified when, an hour later, a shadow fell across the sewing-machine, and Mrs. Ann, turning, caught a glimpse of Sam Mayhew's head retreating noiselessly from the window. Evidently the searchers were still on the alert, and it behooved the sought-for to be cautious and circumspect.

Some dinner found its way down the ladder at a later hour, and during the course of the afternoon the girls ventured to steal out, one by one, for a warm at the kitchen fire. Still they were chilled and cramped enough, when at last, the safe hour of six having arrived, they emerged from the underground retreat, and made ready for a return to their homes. Jessamine looked very pale, and Molly Greenleaf, with many yawns and stretches, declared the game not worth the candle, and protested that this was the last, the very last time she would join in the like.

"That's nonsense," said Susy Lock. "You'll forget, and be as crazy about hiding as ever by next week. That's the way Lucy used to go on before she was married, but she hid just the same, she never would lose a chance."

"Well, perhaps I shall," admitted Molly, with another yawn. "Girls, we must never let on where we've been to-day, not even to the other girls. Mrs. Dustin's cellar is such a good place, we'll just keep it to ourselves."

"We may come again, may'nt we?" pleaded pretty Jessamine.

"Law bless you! yes, come just as often as you like, Miney. 'Taint a might of trouble to hev you. I've been young myself, and I know what girls be."

"Oh, thank you, that's first-rate," and with a sudden impulse Jessamine ran back and kissed the widow's comfortable cheek. "We'll be sure to come," she said.

"That's right, Miney; see you do."

Mrs. Dustin rather built on this promise. More than once, when calculating her day's provisions, she said to herself, "I'll get another pound; them girls may be along." But

November waxed to the Christmas-tide, and New Year gave place to March, and still the promise remained unfulfilled, till at last Widow Dustin ceased to expect.

It was late on a cold night in early April, and she had been long in bed, when at last the summons came, in the shape of a tap, so faint that it was thrice repeated before it roused her. She threw on a shawl and hurried to the door.

"Girls—is it you, girls?" she demanded.

"It's only me," and, to Mrs. Dustin's unspeakable surprise, Jessamine Mayhew, wrapped in a fur cloak, stole in alone out of the darkness. "You said I might come."

"Why, yes, and welcome. But where's the others?"

"Oh, they—they've gone over to the Starbuck's at Smooth Hummocks."

"Well, it's funny you should separate in this way. I thought half the fun was in bein' together."

"Oh, yes, so it is"—confusedly. "But, you know, the Starbuck's isn't a bit good place to hide in. They're sure to be caught; and Molly wanted to be, because her mother's gone over to 'Sconset to Sarah Jane, you know. Her baby came last Tuesday, and while Mrs. Greenleaf's gone is such a good time to have a party, that Molly's rather counting on bein' found. But I"—blushing deeply—"I didn't want to be."

"I don't see why not, if Molly's to have the party anyhow. 'Twon't be no trouble to you."

"Oh, it isn't the trouble. But—but, you see, me and Mark Coffin have a sort of private wager, and if he finds me, he'll—I'll—"

"Well, *what*? I declare, Miney, you're colouring up so I should think 'twas to git married. What! 'tis really? I declare! I never did! Well, Miney, I'd *be* caught, if I was you. Mark's as good a fellow as ever stepped; and your ma, she was a tellin' me once that he'd been after you for ever and a day—ever since you was old enough to say 'Boo' to."

"Oh, I know," said Miney, half laughing and half crying. "Nobody need to praise Mark to me. But, can't you see I don't want to be caught easy? He'd think I 'most did it a-purpose if I'd gone to the Starbucks', and I—" A deep blush finished the sentence.

A droll look came into Mrs. Dustin's eyes at this naive explanation, but she preserved discreet silence. It was barely ten o'clock, so she took Miney into her own bed for a preliminary rest, ignored the fact that the girl was lying awake, feigned slumber herself, and was rewarded when she roused sharp at four by finding her fast asleep. Very quietly she rose and dressed, raked out the fire, filled and hung on the

kettle, and when at five Jessamine sprang up, terrified at the sight of the gray, on-coming dawn, breakfast was ready, and the kitchen warm and cozy.

"Don't you be scared," said the hostess. "Mark Coffin nor no one else is a-comin' in here till after six o'clock. You've more'n three-quarters of an hour to spare, so you just sit down and eat hearty, for the cellar's cold still, and it ain't no place for you, as I very well know, only there's no helping it." Adding, in her private mind, "and I just hope that Mark'll be along early, before you get your death of cold, for you're bound to be found this time, and found you shall be, as sure's my name's Ann Dustin!"

There must have been some lurking mischief in her eyes, for, after she was comfortably established in the cellar, Miney looked up apprehensively, and said:

"Oh, Mrs. Dustin, you won't tell him, will you?"

"Not I; I'll not say a word," was the reply; and Mrs. Ann slammed down the trap.

Eight o'clock struck—nine, ten, eleven. All the elaborate preparations for looking unprepared seemed thrown away, for no Mark came. The time may have appeared long to Miney in the cellar; it certainly did to her hostess above stairs. She fidgeted, she could settle to nothing, and nothing went straight. Her thread broke, the machine was "contrary." "Drat the fellow! why don't he come?" she repeated more than once, her eye turned to the window which commanded the road over the downs which led to town. It was not till the dinner potatoes were on, and the pot-pie beginning to send forth savoury fumes from the fire, that at last the gate swung violently on its hinges, and the long-expected Mark rushed in.

"Oh, Mrs. Dustin," he panted, "have you seen Miney Mayhew? The girls are hiding to-day—four of them—and we found three over at the Starbucks'; but she wasn't with 'em, and she's the only one I care about catching."

"Wa'n't she with the rest? Do tell!" said Mrs. Ann, enjoying the situation.

"No, and I don't call it fair," replied Mark, stamping angrily about the kitchen. "I made sure she'd be with the rest, of course, and I staid up all night in the meeting-house steeple with a glass, and saw them stealing off to the Hummocks, and then I went after. She's gone away separate, and none of 'em knows where. Molly'd have told me in a minute if she'd known, for she knew what I—what we—She ain't here, then, you said?"

"I sez nothing. I sez look for yourself. I ain't one to spoil fun by telling one way or the other."

But even as she spoke—oh, treacherous Mrs. Dustin!—she pointed with a large wink directly at the trap-door, whose hinges were distinctly visible. Perhaps Mrs. Dustin had not taken the pains to cover them as circumspectly as on previous occasions. Mark was quick. In a flash he saw, he comprehended. With one bound he was across the kitchen, had seized, raised the trap, and vanished down the ladder. A girlish scream came from below, then a low murmur of words, and finally a little sound, slight in itself, but full of suggestion, and with a wonderful knack of making itself heard at a distance—the sound, in short, of a lover's kiss. After that came silence, and more low talk, broken upon by Mrs. Dustin, who chuckling inwardly, and pink with excitement, popped her head over the edge of the aperture, and remarked, “Folks can't live on air, if they *are* courtin', and they can die of damp. Miney's been quite long enough in that cellar, Mark Coffin; fetch her up. The pot-pie's ready, and it ain't so bad as it smells, and you and she'll be all the better for a bite, if you'll consent to take time for it.”

The “round cellar” was not, in truth, a romantic framework for a pair of lovers. Still it was rather a pretty picture that Mrs. Dustin looked down upon from over the edge of the trap. Miney and Mark sat side by side in the midst of the buffalo robes—her pretty head was on his shoulder. She raised it, dyed with blushes, and Mark muttered something very like “Hang pot-pie!” but they ascended the ladder obediently all the same; and once at table, dinner did not seem so objectionable or so unreasonable as might be supposed. “I can't think how you came to remember the cellar so suddenly,” Miney said once; and that mendacious Mrs. Ann replied, “One of the hinges must have come uncovered, I reckon,” while Mark whispered in her ear “I could have found you in the heart of a stone, I think, Miney, I was so set on it,” and happily deceived, Jessamine said no more. Mrs. Dustin stood at her door, and watched them walk away together. The afternoon, though bright, was fresh and cold, for a keen sea-wind blew in, flattening the faded grasses and rustling the dry heather on the plain. Mark held Jessamine's flapping cloak tightly together, she leaning upon his arm. They disappeared behind a low thicket of evergreens, and with half a smile and half a sigh Mrs. Dustin turned back into her kitchen, saying to herself:

“I'll free my mind about that wink when she's been married a year or two. She'll forgive me easy enough, or I miss my guess. It's natural for a girl to want to hide, but she'd be sorry enough sometimes if she wasn't found out; and I'm a woman, and I ought to know.”

LEGENDS OF MUNICH.

Pages from the Album of a Fair American.

BY A MODERN MINNESINGER.

Sweetest friend, you bring to mind, I
 Promised you some album verses.
 I'd have sent them long ago if
 Heaven had given me skill enough to
 Weld them in a worthy fashion ;
 Sweetly telling of my fancies
 And my secret aspirations,
 And such things. Last night I bought a
 Quire or two of gilt-edged paper,
 And of tinted ink a bottle ;
 But, alas ! one thing I could not
 Purchase, e'en for love or money :
 'Twas the skill poetic that we
 Need to bring our inspirations
 Into proper rhyme and metre ;
 But a saving fancy strikes me,—
 I will tell you what you missed when
 Down at Munich, and instead of
 Seeing all the curious city,
 Famed for beer, and art, and music,
 You were to your bed confined by
 That sad foe of health—grim fever.

Shall I tell you first the story
 Of sweet Adelheid the gentle ?
 You remember how the peasant
 Women kneeled before the statue
 Of Madonna ; there they pleaded [them
 That the Queen of Heaven would give
 Grace, and peace, and consolation,
 And relieve them from the sorrows
 They must bear as earthly pilgrims.
 There they kneeled, the pretty maidens,
 And the agèd—these were once as
 Young and handsome—and they offered
 Mountain flowers, if you would buy them :
 Now they're known as "Radiweiber."
 'Twas the younger ones who prayed thus :

"Gracious Virgin, we adore thee,
 Thou art pure and wondrous fair ;
 See, we humbly bend before thee,
 Deign to hear a maiden's prayer.

"Gracious Virgin, who above us
 Reign'st in queenly majesty,
 Give us grace, and guard and love us,
 For we bend to none but thee !"

Yea, full many a wondrous scene has
 Been enacted near the statue
 That adorns the Rathhaus Square—
 Tournaments, and grand procession,

The great Drama of the Passion ;
 And e'en yet, whene'er the fête of
 Corpus Christi's celebrated,
 Flags and banners wave triumphant,
 Priests and laymen, white-clad virgins,
 Chant the praises of Madonna ;
 For has she not often saved the
 City from great tribulation,
 Pestilence, and need, and famine ?
 Long ago, before Madonna
 Kneeled poor Adelheid,—her lover,
 In the war, had gone to Russia,
 With the Bayern and Napoleon :—
 Thirty thousand were the victims ;
 Many a day she came to kneel there,
 Weeping, pleading that the Queen of
 Heaven would guard her absent lover,
 And would guide him safely homewards.
 Three long years, 'mid rain and sunshine,
 There she prayed, then wandered sadly
 Thro' the Gate that leads to'ard Russia,
 Gazing if she could not see the
 Troops returning. But they came not ;
 And their bones lay on the steppes,
 Bleaching white among the snow-drifts.
 "They, too, died for home and country!"
 This is all the monarch caused to
 Be inscribed upon the gloomy
 Obelisk, that calls to mind their
 Memories to their kin and country.
 And poor Adelheid, she wearied
 Not in prayer, until her heart broke.
 People wondered why the silent
 Kneeler came no more, but death had
 Ta'en compassion on her sorrows,
 And released her from her sufferings.

Many a story, sad, like this one,
 Some more sweet, still clung about the
 Ancient relics of the city,
 Just as ivy clusters o'er the
 Walls of many a ruined castle :—
 Many a tale of troth betrayed,
 Many a tale of love unanswered,
 Tell these relics of the past.
 Then, the tower of old Saint Peter's,
 Crook'd it is ; which people say was
 Caused by one whose name we fear to
 Speak in public—Gottseibeius !
 Just beneath it, in the ancient
 Chapel, where the city fathers
 Keep their records, there the Virgin

Once appeared unto Duke Christoph,
While he prayed before the altar ;
Just as now she comes to earth in
Glad Alsatia, and in other
Lands, when properly applied to !
But to us, poor heretics, she
Scorns to put in an appearance.
Never mind, we too, find gracious
Angels in the world around us,
And we see them with a halo
Round them, bright it is, and glorious
As the one about Madonna :
And we bend before them likewise,
And at times we pray sincerely :

“ Gracious maiden, born of gladness,
Sweet thy presence as thy face,
Banish thou our human sadness,
Deign to bless us with thy grace.”

And some bless us, others leave us
Hearts, in truth, that need repair,—
Though, to tell the truth, that's seldom !

Broken-hearted ! That reminds me
Of Zoloiska, how she cast her
Fair young life away ; the legend
Says that in her sad despair she
Cast herself from the cathedral's
Tower, and ended thus her sorrows !
And of Agnes named Bernauris—
Young Duke Albrecht dared to love
He a princeling, heir apparent, [her,—
She a lovely, lowly maiden ;
'Twas her lover's father caused her
Death,—they cast her, thereat Straubing,
From the bridge, into the Danube !
Albrecht mourned and then forgot her.
But enough of these sad stories,
I will tell you one more pleasant,
All about the bell of hunger,
And the Theatiner Fathers.
'Tis a curious legend, and is
Told about the Monastery
Of Saint Theatine : the monks were
Men of good repute, and holy.
Beggar monks they were, who lived on
What the Lorde'endeigned to send them,
Fasting three long days before they
Rang aloud their bell of hunger.
'Twas a bell, this, deftly fashioned,
Made I know not where ; an artist
From beyond the sea once put on
Canvas, bell and he that made it.
There he stood, the village founder,
Strong of arm and bronzed of feature ;
Proud he felt ; the village pater
Came with violin to prove the
Work accomplished, and he said the
Tone could not be made much better,
Though the house-dog seemed to fancy

That such music and such cling-clang
Were produced but to annoy him,
For he growled out his displeasure.
Long they lived in peace and comfort,
These good monks, the Theatiners,
And the Lord, who feeds the sparrows,
Sent them food in great abundance ;
Till one day, two-hundred years since,
(So the city chronists tells us)
The Court Cook forgot his duties,
And went off on distant journey,
All oblivious 'twas his week for
Feeding the good fathers.
'Twas a serious time : the Abbot
Called the monks to solemn council :
“ 'Tis three days,” he murmured, since
Monastery doors were opened [the
To receive our needed rations.
Can the Lord have us forsaken ?
Have we in our midst a weak and
Sinful Brother, that the Lord doth
In His anger thus chastise us ?
Yea, this very morn the cook came
To my room, with doleful visage,
And assured me that the larder
And the cellar were quite empty ;
And the Court Cook (Heaven preserve
For the last rare deer he sent us, [him !
And the glorious purple wine-juice)
Seems to have us sheer forgotten.
Let us pray, and then support our
Pleading with the bell of hunger,
That will soon fill up our larder ;—
Oh ! it's hard to pray and famish !”
Then the monks in sad procession,
Climbed up to the ancient belfry ;
And the Abbot followed, panting.
And they rang the bell of hunger,
'Till the city, to its utmost
Limits, heard the wailing cling-clang.
Such a rushing ! such commotion
Ne'er before was seen in Munich.
“ God preserve us from destruction !
God forgive us, poor weak sinners !
Hark ! the Theatines are famished !
Is not that their bell of hunger ?”
Soon the cellars and the larders
Give up from their stores in plenty,
And a host of cooks and butlers
Hurried with their well-filled baskets
To the convent, where the brother
At the door looked up amazed, and
Silently received the bounties,
Silently gave thanks to Heaven !
Venison from the royal palace,
Hares and rabbits, quails and pheasants ;
From the cottage came delicious
Sauerkraut ; a Herr of Giesing
Sent a sucking-pig with stuffing,
With the message “ Wohlbekomm' es !”
And the city fathers further

Sent them from the Rathauskeller,
 Rhenish, hock, and muscateller !
 'Twas a glorious, gladsome banquet
 That the holy men partook of,
 Though 'twas whispered that the Abbot
 Did imbibe of wine too freely ;
 True, he stumbled as he left the
 Hall, and needed kindly aid from
 Two lay brothers to conduct him
 To his rest—if true, I know not ;
 Though 'twas said by Pater Alois
 That the Abbé's weakness came from
 Eating, on an empty stomach,
 Too much Sauerkraut and Ferkel !
 All we know is that the Paters
 Rang no more their bell of hunger,
 But each year they once assembled,
 And in chant and praise gave thanks to
 God, who saved them from starvation.

Good old monks, we can excuse you
 When at times ye get enjoyment

From the world and all its pleasures.
 We well know you, as ye wander
 Through the streets on paths of mercy,
 Visiting the sick one's chamber,
 Giving to the weary comfort,
 To the dying solace bringing :
 Heroes, too, ye are, who conquered
 Once the fire that burned so fiercely ;
 And when young, how oft your thoughts
 Wandered to the world deserted : [have
 Just as once the Gold Land artist
 Painted you : ye stood and pondered :
 Through the window came the sunlight :
 And outside, green Spring triumphant
 Reigns : a thousand feathered songsters
 Trilled and sang her praise and glory.
 Ah, poor captives, she 'twas sent you
 On that sunbeam, too, a message,
 Borne by two sweet butterflies ;
 Did not then you wish to wander
 Back to paths of life and sunshine ?
 To the world and all its pleasures ?

Facts and Gossip.

LONGEVITY IN EUROPE.—M. de Solaville analyses, in the *Revue Scientifique*, the results of recent European censuses by ages, and the register of deaths also by ages. If we strike a mean of the census from 1869 to 1872, we find that Europe (exclusive of Russia, Turkey, and some small Southern States) possessed in 1870 a mean population of 242,940,376, classed as follows from the point of view of advanced ages :—17,313,715 of more than 60 years, 79,859 of more than 90, and 3,108 of more than 100 years ; *i.e.*, 1 inhabitant in 12 of more than 60, 1 in 2,669 of more than 90, and 1 in 62,503 of more than 100. Women, M. Solaville finds, are more numerous in extreme old age than men, and the difference increases with the age. Thus at 60 years the advantage is with the women in the proportion of 7 per cent., at 90 and above it rises to 45, and with centenarians to 60 per 100. It is in France that we find the greatest relative number of inhabitants at the age of 60 and upwards ; but it is not so for centenarians, of which France has less than all the other States of Europe except Belgium, Denmark, and Switzerland. From a calculation of deaths by ages the result is reached that, to the total deaths, those at the age of 90 and upward bore the following proportions to the countries named, and arranged according to the decreasing order of importance :—Great Britain, 9.73 ; Sweden, 7.39 ; France, 6.58 ; Belgium, 6.07 ; Switzerland, 6.00 ; Holland, 4.47 ; Italy, 3.76 ; Bavaria, 3.42 ; Prussia, 3.06 ; Austria, 2.61. The result is in accordance with what we know of the mean age of the deceased in the same countries.

DR. RICHARDSON'S charter of the child is a simple, but comprehensive one. Every child has a right to expect that its own mother should nurse it, if she can. It has a right to fresh air, simple food,

and warm, loose garments. It has a right to immunity from corporal punishment at the very least till such time as it can be made clearly to understand that the act for which it is punished is a wrongful one. As he grows older, the boy has a right to protection against excessive study, which taxes the growing frame beyond the powers that belong to maturity, and masters and parents need to restrain him in any attempt to resort to stimulants and tobacco, and games of chance. As for the girls, there is the danger, on the one side, of over study; on the other, of the sacrifice of health to the superstitions and customs of modern society. It will probably be very long ere the sanitary reformers subdue what Dr. Richardson calls "the passion for unhealthy systems of clothing," and it is almost hopeless to declaim against the late hours of modern society, except to those who have the good sense to stand aside, and let society go on in its own foolish way.

PROF. E. D. COPE, of Philadelphia, has secured the skull of an extinct monkey, which seems to fulfil in a remarkable degree the condition of the missing link between man and the lower animals. It is not larger than the skull of a small ground-squirrel, and belongs to a species of marmoset. It was found in the Valley of the Big Horn River, Wyoming Territory. The Professor says: "This skull is remarkably similar—in miniature of course—to the human skull. The brain space is remarkably large, and is, in fact, several times larger than the brain space of any of the skeletons of animals of the same period of time. The characteristics of the formation of the human skull are clearly defined—so clearly as to be remarkable. The teeth are almost the same as human teeth, while the jaw has many strong points of similarity. I consider this skull as the earliest indication of the existence of man. It is a new species of a familiar class, and has hitherto been unknown to scientists. The connection between man and this animal, it seems to me, must have been very close, although, of course, nine men out of every ten would raise a dispute. No animal at that time except this peculiar species has a head like that of a human being, and the brain space, contrasted with the brain space of other animals, or even of the monkeys of to-day, shows a vast superiority of intelligence."

THE hypothesis offered by Mr. Francis Galton in explanation of the phenomenon of "mental images," namely, that the mind builds up the mental picture on the foundation and with the materials furnished by external objects, as "children and sick people get faces and forms from paper-hangings and curtains;" the eye seeing little, and the mind supplying the rest of the idea, is not new, though it may be true. Leonardo da Vinci, the great painter, showed his appreciation of this method in his direction "To compose a Battle Piece"—namely, to stare at a smoked and daubed wall until the confusion suggests the desired conception. And the same explanation has been submitted by all writers before and since the time and speculations of the author

of "Demonology and Witchcraft." The chief merit of Mr. Galton's contribution to the literature of this subject is the admirable summary he has given of the known facts with regard to the association of sound and colour with form. The manner of this association is unimportant. It is the result with which we have to deal. Meanwhile, none of the theories and hypotheses raised by the expounders of hallucinations are entirely satisfactory, because they either do not recognise, or they practically disregard, some of the most potent factors in a class of experiences which has long constituted the opprobrium of introspective science. A man sees a ghost; to him it is as *real* as anything else he sees, and it is not to be explained away or accounted for by any reasonable process of argument. A reference to the power of the imagination will not satisfy the subject or victim of hallucinations. If he be weak-minded, he will insensibly come to believe in their reality; and, even if he be strong-minded, they will worry and annoy, perhaps mislead him. It is, therefore, a matter of moment that what we may designate the anatomy of ghosts should be scientifically investigated. By way of suggestion, we venture to throw out the following hints. Every personality or consciousness has surrounding it an atmosphere of its own, with clouds of hazy impressions and nebulous thoughts, and all the apparatus necessary for mental spectres, from which the mind receives back more or less accurate, or distorted, reflections of its own ideas. In addition to this proximate source of "mental images"—which are external to the observer, and yet the mere reflection of his own mind—there is the remote, or true external, which is seen *through* the atmosphere, the surroundings or environment of the mind itself. Such external objects as have a life and individuality of their own, have also *their* environments and systems of reflexes, so that what we see with the "mind's eye," when thinking of another person, is the aggregate or mean—or resultant—of our previous images of him, which are made up of what we have in past times seen through our environment, and have reflected back from it, together with whatever impressions may now reach us through the environment of the person modified by his reflexes, and through our environment modified by the disturbing influences which it also must exercise on the impression we seem to receive.

WE are pleased to see that *House and Home*, has reappeared, and reappeared, too, in an improved form and "get up." It is devoted chiefly to "health and sanitation," but readers will find within its pages interesting and instructive articles and gossip on every conceivable topic relating to the house and the home.

YOUNG men are complaining a great deal at the present time of their prospects in life. They say that the times are altered, that the openings to success once possible for their fathers are no longer possible for them. They cannot explain why it is so, but they have no doubt about the fact. And this dreary outlook is shared by young men engaged in commercial pursuits as well as by those who are

training for a profession. Commerce, says your merchant's apprentice, in a very lugubrious tone, was never in a worse way. The blanks are many, the prizes are few. A service of five years, remunerated by a poor £100, is the difficult path (if one is "kept on" at all), to a clerkship worth about £2 a week, with advancement in the very distant future. This young prophet of evil things will then go on to strengthen his case by allusions to terrible instances of educated and intelligent gentlemen, well advanced in life, who are earning barely enough to keep body and soul together. It is the same in the professions. If your young despondent is training for the Church he will enlarge on the difficulties in the way of preferment for any candid and outspoken young man. He will point to men who have obtained high positions by clap-trap, by pleasing the vulgar, or by a toadyism that is even worse. Your young doctor, after a melancholy allusion to "bones" and other difficulties to be surmounted at the outset, will dilate on the overcrowded state of the profession, the humbugging arts by which many succeed, the necessity of money to "back one up." Not unfrequently the complainant's case is a strong one; but does it never occur to a young man about to enter a profession to ask himself what are his motives for doing so? If it is only for the name of the profession, for the higher social status a professional man is supposed to enjoy, who can wonder at his failure? To obtain high success in any profession, aptitude, inclination, devotion, enthusiasm are all indispensable. And does it never strike a young man in business, who does not seem in a fair way to success, that the fault lies mainly in himself? Does it never occur to him that if he makes himself valuable and almost necessary to his employer he will always be able to command a fair price for his exertions? Does he ever think of tastes and habits he may have formed which go far to forfeit his employer's esteem and depreciate the money-value of his own services? An employer cannot hold in any high esteem, or advance to positions of trust and responsibility, a young man who gives himself up to unlimited beer and billiards. Someone may retort upon us: "Dost thou think, because thou art virtuous, there shall be no more cakes and ale?" Far from it, we exclaim. Cakes and ale are excellent things, and we should fare ill without them. But it is possible to have too much even of a good thing, and when we let cakes and ale stand in the way of our own profit and interest we are doing a stupid and unworthy thing, and it is well that we should be occasionally reminded of it. At least, let us be candid; and, if we prefer cakes and ale to more solid advantages, own the preference and attribute our ill-success to its real cause.

Answers to Correspondents.

G. B. (Manchester.)—"Sylvanus Satyr" will doubtless be greatly pleased to hear of your commendation of his "exceedingly clever and amusing satire on the Bradlaugh question in the House of Commons," but we have no authority to divulge to you his real name. He has no doubt good reasons for maintaining his *incognito*.

THE
Phrenological Magazine.

APRIL, 1882.

MR. MUNDELLA, M.P.



DIAMONDS, and all the precious stones and metals, are generally found in the bowels of the earth, and have to be dug for, and when obtained they have to undergo a process of preparation before they can be finally made use of, either in the arts or for adornment. They may sometimes be found upon the surface, and pure, but that is not often. So it may be with men. But, as a rule, great men grow up in obscure places, and are brought forward by the force of circumstances, or else by the force of character. Getting into harness, they show their capacity for drill and discipline, and in due course, like the diamond in the hands of the lapidary, they prove themselves to be choice men among men.

Mr. Mundella cannot be compared to a diamond, however ; his qualities are not those of mere brightness and glitter ; his talents are of the practical sort ; they are active, not passive. He could not be a quiet, do-nothing man if he tried, he must be working. When his work is done, so will his life be. He is in every way organised for action and endurance. He is a Boanerges, a motive power, and capable and disposed to put forth effort. He is like one of the fire-brigade, always at hand, with harness on ready for action at a moment's warning. He is more like the present Prime Minister, in this respect, than any other known man.

He has a predominance of the motive temperament, which renders him strong, tenacious, deliberative, reliable, and indefatigable in his labours. Such temperaments are not characterised for brilliancy, display, and prompt off-hand action ; they go to work as though they were going to work all day, instead of to run a race for five minutes, and then stop and rest.

His head is broad from ear to ear, which indicates force,

pluck, and power of endurance. He does not stop at trifles, and obstacles only stimulate him to greater exertion.

He is in his element when he has a difficulty to overcome, or arbitrary questions to settle. Such men are born for stormy times and rough waters. His mental temperament is favourably developed, and facilitates the power to enjoy and suffer, to think, and take delight in mental exercises; yet his mind is the most active when he is actively employed physically. His vital temperament is none too strong; he is liable to draw hard upon his constitution, and to do more than he can afford to continue to do. His digestive power is scarcely equal to the task put upon it, but his breathing power is naturally strong.

The form of the head indicates strong qualities of mind, and a distinct character peculiar to himself. The most striking features of his character are energy and practical common sense. His breadth of head indicates force, resolution, industry, economy, and a due degree of reticence and conservative power; but he is not so reticent as to keep behind the curtain, or hold fire too long. The entire base of the brain is large, both in front and at the back, as well as in the middle lobe. Few men have greater perceptive power and practical available talent. He is direct, and to the point; takes tangible views of subjects, and has the faculty of hitting the nail on the head every time, and saying just what the occasion requires, and no more.

He has a superior mechanical eye, and could have excelled as a mechanic, manufacturer, or architect, also as a marksman. He knows how to put questions so as to get such answers as will reveal the whole subject. He sees more than most men do going over the same ground, or examining the same subject. He is a good judge of property, and could easily manage a large business, or superintend a great number of men. Order and Calculation are large, which enable him to make correct estimates, to arrange methodically, and to systematise his business and do things by rule. He is not often in so great a hurry as to leave his work half-done.

The fulness of the brain in the temples indicates ingenuity and versatility of talent, and power to contrive ways and means. His powers to analyse, compare, combine, and see the relation and adaptation of principles is great. He is very successful in studying effects, results, and the bearing of one subject on another.

Such formations of brain seldom indulge in abstract reveries, or speculate on far-fetched theories or mystical subjects. The head is sufficiently lofty to indicate a high tone of mind

and great moral strength, steadiness of purpose, strength of will, and self-respect. Whether professedly religious or not he could scarcely help living a moral, upright life. He has a strong love-nature, and would be quite out of his element without a wife and family of his own.

Anthony John Mundella, M.P., was born at Leicester in March, 1825, the eldest son in a family of five. Mundella senior was a Lombard refugee, a native of Como, who, taking part in the insurrectionary movement against the Austrians in 1820, was driven into exile. He landed in England almost



penniless, and settled eventually in Leicester, where he endeavoured to earn a livelihood as a teacher of languages. Instruction in modern tongues was then a luxury in which but few indulged, and the luckless Antonio in consequence frequently broke the exile's bitter bread—endured what his immortal countryman Dante has called “the hell of exile.” Educated for the Roman Church, he had no regular profession on which to rely. His income was consequently at all times precarious. He married, however, a remarkable woman,

Rebecca Allsop, of Leicester, a lady richly endowed mentally, and possessed of some little property. She was an adept in lace-embroidery, then a remunerative art, and her skill and unremitting industry in the main supported the Mundella household for the first ten years of her married life. Then there came a crisis. Her eyesight almost completely failed, and Anthony had in consequence to be removed from school in his ninth year in order to put his childish shoulder to the wheel. So far his education had been carefully superintended. Mrs. Mundella had a wide knowledge of English literature, was a diligent Shakspearean scholar, and little Anthony had been as quick to learn as she had been apt to teach. His acquirements accordingly secured him employment in a printing office, where he remained till his eleventh year. Thereupon he was apprenticed to the hosiery trade. He was most fortunate in his employer, a discriminating man, whose son, a member of Parliament, was the first to welcome Mr. Mundella to St. Stephen's on his return for Sheffield in 1868. In his eighteenth year his apprenticeship was at an end. He had mastered his trade thoroughly, and contemporaneously he had learned all that could be acquired at the Mechanics' Institute of the town, and a great deal more. He was an indefatigable reader. In his nineteenth year, so conspicuous was his business capacity that he was engaged as manager of a large enterprise in the cotton trade. At twenty-three he removed to Nottingham to become junior partner in a firm which shortly transacted the largest hosiery business in the Midlands, Hone, Mundella and Co., employing as many as 3,000 "hands." Of this flourishing company Mr. Mundella is still a director, though not interfering very actively with the management. He is, moreover, chairman of the Commercial Union Insurance Company, and is director of the National Bank and of the Bank of New Zealand. To very few "printers' devils" or "stockingers" is it given thus to have a finger in the *grande commerce* of the country, but Mr. Mundella climbed the ladder steadily and skilfully, and it cannot be said of him that when he got to the summit he forgot the condition of the less fortunate toilers whom he left below. On the contrary, no working man in England has striven more earnestly or intelligently for the elevation of the mass than the member for Sheffield, as a bare enumeration of his political and legislative *res gestæ* will readily show.

Always precocious, Mundella's political career began in mere boyhood. The Austrian tyranny which had driven his father from his native land, and the miserable condition of the "stockingers" among whom his lot was cast, naturally dis-

posed him to become a partisan of the "Charter," which was at that time being earnestly advocated in Leicester by the well-known Thomas Cooper, author of the "Purgatory of Suicides," a work written by him in Leicester Gaol.

At Leicester, from 1840 to 1848, Mr. Mundella agitated by voice and pen for the "Charter," and had the satisfaction of hearing reform ballads of his own composition sung in the streets. When he removed to Nottingham in 1848, new public duties awaited him. He was made successively Town Councillor, Sheriff, Alderman, Justice of the Peace, and President of the Chamber of Commerce. These local experiences were, of course, valuable to him as a legislator *in posse*, but it was in another and more original field that he first did signal service to the entire community. He was the author in 1860, as he was the president for eleven years subsequently, of the Nottingham Board of Arbitration and Councillor for the Hosiery trade—the harbinger of so many others. Wearied with incessant "strikes" and "lock-outs," Mr. Mundella, after many weeks of fruitless negotiation, at last got employers and employed together. After three days' discussion, the then existing strike was closed by mutual concession, and a resolution agreed to that in future all questions affecting wages should be authoritatively settled by a board consisting of nine duly elected representatives of the masters and nine of the men. The board held its first meeting on the 3rd of December, 1860. In an article on "Conciliation and Arbitration" in the *Contemporary Review* for 1870, ten years later, Mr. Mundella thus sums up the results of the experiment:—"Since the 27th of September, 1860, there has not been a bill of any kind issued. Strikes are at an end also. Levies to sustain them are unknown; and one shilling a year from each member suffices to pay all expenses. This, not a farthing of which comes out of the pockets of their masters, is equivalent to a large advance of wages. I have inspected the balance-sheet of a trade union of 10,300 men and I found the expenditure for thirteen months to amount to less than a hundred pounds." It is against the operation of this beneficent principle—this proved success—that the Durham coalowners have been the first, on a great scale, to lift impious hands. It is impossible for any impartial observer not to conclude that they prefer the darkness to the light, their deeds being evil. Mr. Mundella for one does not conceal that this is his view of the situation.

No sooner was the Nottingham method of settling trade disputes by arbitration recognised as feasible than Mr. Mundella, as its author, was invited by many towns, and among others by Sheffield, to give popular expositions of his system. Shef-

field had suffered many things at the hands of Broadhead and his infamous crew, and so pleased was the cream of the working men with the prospect of escape from the vicious circle in which they were involved that in 1868 they invited the chairman of the Nottingham Board to come forward as their candidate. He was returned at the head of the poll notwithstanding the strenuous support given to Roebuck by Broadhead at trade union meetings. On entering Parliament the honour of seconding the Address was conferred on him by Mr. Gladstone. Since then his efforts to benefit the working class have been unflagging, and, on the whole, most successful. His speech on the second reading of the Education Bill was pronounced by Mr. Gladstone to be the most important delivered on the occasion. He had examined into the educational systems of America, Germany, Switzerland, and Holland on the spot, and was therefore in a position to speak with authority on the all-important theme. His persistent efforts to repeal the Criminal Law Amendment Act, that the equality of workmen before the law might be established, and to pass the Factory Nine Hours' Bill in order that the hours of labour might be shortened to hapless women and children, have been rewarded. The Government has itself done what it would not permit him to do. All the same the credit must be accorded to Mr. Mundella, whose views on labour and factory legislation were at the general election of 1874 made test questions all over the North of England. In 1878 he succeeded in carrying a useful bill for the Preservation of Freshwater Fisheries, so as to increase the supply of food and give harmless sport to the poorer class of anglers. In the session of 1879 his bill to abolish property qualifications in connection with all local government and municipal bodies was lost by only six votes. Such legislative results are small, but nevertheless important, and they unmistakably point out the man's leanings.

At the last general election Mr. Mundella was returned to Parliament for his adopted town of Nottingham, and in the appointment of places in the new Government which ensued the Vice-Presidency of Committee of Council fell to his share, a position in which he has already signalled in deep interest in education.*

* We are chiefly indebted for the above biographical details of Mr. Mundella to a little brochure, entitled "Radicals in Parliament."—ED. P. M.

LECTURES ON PHRENOLOGY.

BY DR. SPURZHEIM.

LECTURE XII.

We come this evening to organs less difficult than those we considered the last time; and you will remember that our mode of proceeding with the intellectual powers was this: first, we admit those powers which make men and animals acquainted with external objects and their physical qualities; that above these are placed the powers of considering the size, the configuration, the colour, and particularities. First, then, we become acquainted with the individual objects, then we learn their situations, their qualities, their relative situations.

EVENTUALITY.

Men acquire a knowledge of the number of objects; and we come now to consider this kind of knowledge. Children, from infancy, are particularly attentive, not only to the existence of



PITF.

- 24. Individuality moderate.
- 32. Eventuality large.
- 37. Comparison rather large.



MOORE.

- 24. Individuality large.
- 32. Eventuality small.
- 37. Comparison very large.

objects and their qualities, but to every thing which relates to them, and any one accustomed to children must have observed, that in a very short time they make a great number of observations, so that many persons are astonished at the progress their children make; if they would go on so for twenty years they would all become great geniuses. Among adult persons there are some who are quite indifferent to occurrences, and take no sort of notice of any thing around them. Others know everything which happens; not a thing can take place but they must know it; a noise in the street—what is it? They wish to know everything; a stone falls and they know

it. Other persons, again, are content to hear what happens, and take no active part about it. Some have the external senses so quick that they perceive every thing; and if you pay attention to their organization you will find that the middle and lower part of the forehead comes out.

It is observed to be very flat in new born children, and to remain so until about two months after birth, when it begins to expand; and in some children there is a projection quite like a walnut in the middle of the forehead, and you may depend upon it that such children always show a desire to have stories told them, and to become acquainted with things around them. There are adult persons who wish to know all the occurrences of the day, and who like to tell stories; this desire appears very common in mankind, and the part is much developed, generally speaking. Reason with people, and tell them stories, and see to which they will remain most attentive. Those who take an interest in observing society must have noticed that there are persons who make themselves agreeable companions; they know something of every science, and they have a general knowledge of everything; they know something of chemistry, of botany, of painting, of music, of architecture, and so on, and you will find that such persons are full here. However, this peculiar development I speak of is most easily observed in children; it comes quite out in the middle of the forehead, and such are always fond of hearing stories; and if you find individuals depressed in that part, you may be quite sure that they take no interest in what is going on around them.

There are persons who easily recollect facts; in reading history, a greater number of persons will recollect the facts, the events, than the dates or names; they may recollect the dates for a little time, but they soon go; and they may be able to repeat the names for a short time, but they are also forgotten, yet the facts remain, and that power belongs to this part. If you are reasoning with individuals, and you find this part most developed, begin always to state facts, and then you enter into their mind. Those among medical men who publish cases, and never reason on them, have this power I speak of; although the power is the basis of reasoning, yet in itself it is confined to the knowledge of facts. By far the greater number of individuals have this part of the forehead developed. There are some nations in whom it is more developed than in others; it is more prominent among the French than the Germans; the French think that it is an essential feeling which exercises the external senses, since the wish to become acquainted with external objects, and since the two powers of Individuality

and Eventuality exercise the external senses, and the nations who have these two powers most active have the external senses more active. You must repeat things to some persons two or three times before they hear so as to understand, and others hear at once. There are many children and adults fond of acquiring a knowledge of facts. Now, you will find that some persons like to learn the precise period, and dates, and names connected with any occurrence; if they tell you stories they are not satisfied with telling you the facts, but they will say, that such a thing happened in such a year, such a month, and even on such a day; and unless they can tell you all these they will not feel satisfied; others say, never mind them; they will tell you the facts and forget the periods.

We see, therefore, great differences in the memory, because certain powers are more active than others; hence there are several species of memory, and this has been observed in former times, and especially by the priests; they found that there were persons more attentive to dates—numbers; others to events; and they divided the memory into several species, and they called that memory which retained dates and numbers a verbal memory. But we can have no organ for memory. In painting and music there must be various other powers brought into action, for if a man had no more ideas than those of mixing colours, he would never excel as an historical painter. Individual powers are necessary to certain talents, but the whole faculty, commonly ascribed to one talent, generally depends on a combination of powers. Hence, to become a good musician, melody and calculation are necessary.

TIME.

I have before spoken of a power which disposes a person to take notice of events, and I have called it Eventuality, and there is, it appears to me, likewise a power for noticing the duration or succession of events, and I believe that this is done by a peculiar power of the mind, and I call it Time; it is a power essential to music. Can we admit an internal power of the mind as necessary to music; or shall we suppose that the talent is acquired by the accuracy of the external sense? Every one knows that there is a difference between hearing and having a musical ear; a person may hear a sound very well and yet have no musical ear. There are persons who do not hear the harmony of tones, and there are others, although almost deaf, yet if they hear two tones brought together that do not accord, they say there is no harmony in this, there is discord. This power exists, in a certain degree, in animals; there are singing birds and birds which cannot sing. Now if

the power which disposes the birds to sing depend upon hearing alone, as some have said, try an experiment ; take the egg of a singing bird, and let it be hatched by another bird which does not sing, and you will find that the young bird will sing ; and you will find, moreover, that the males will sing, and that the females will not. Hence there must be an internal impulse, an instinct. In men there is a similar power ; the power of judging of the harmony of tones is not always received by hearing, but some men begin to compose from within ; great masters of musical composition have been both blind and deaf, and yet go on with their composition ; they cannot hear any instrument, but they commit their thoughts to paper ; they read them, they calculate on them, and they go on with their composition.

This power of the mind depends upon a cerebral part, and you will find that all great masters of composition, all great composers, are full hereabout, above Calculation.* You may see this power developed sometimes in an extraordinary way ; the infant Lyra, as she is called, when only six months old, showed a great talent for music ; she was displeased by certain tones and amused by others : there must be something in the interior to do this. We have several examples of the early manifestation of this power. When Handel was quite a child his parents took away the instruments from him, and when they were gone to bed he would get up and amuse himself by playing on them. Whenever you find that talent active in children, you will find the part I have mentioned developed. I have observed a great many persons, and I have found that if this part comes out more than the external angle of the eye, just above Calculation, that such persons have the power of judging and understanding music.

This is the cast of Joseph Haydn ; you see that this organ is well developed, and so is Wit ; he had Wit also. There are countries in which this organ is found much larger than in others. Now if you take the common people of this country and the common people of Germany and compare them, you will find the organ larger in the Germans. If you know establishments where children are taken in on account of their musical talent, and compare those children with others, you will find this organ much broader in the former. Several blunders may be made with this power, but you must see whether it comes out beyond the external angle, and then you may be sure of it.

* When Time is large it gives a roundness and breadth to the forehead immediately above the external corner of the eye.

TUNE.

Is melody a fundamental power, or is it a compound operation of the mind? To constitute a good musician, a combination of powers is necessary; first, it is necessary to possess melody, then time, or the duration of melody. There are individuals who like music and have a good musical ear; they feel the harmony and melody, and can immediately detect any discord in the tones, even when a number of instruments are playing at the same time; and harmony is a combination of a great variety of tones agreeably, whilst melody means only an agreeable succession of tones, or simple sounds. Now you will find some who have a good musical ear, and feel the melody or harmony, but yet have great difficulty to play in concert; others, again, play in time, but are not harmonious in what they bring out. We see, among musicians, some celebrated for one of these qualities, and others for the other.



HANDEL : Tune large.



ANN ORMEROD : Tune small.

Some composers produce very harmonious music, but there is no depth in it, it is quite superficial, whilst others compose with great feeling, combining harmony with sound and science. This organ is placed here, beneath the posterior convolutions of the anterior lobes at the base of the brain, and this convolution passes transversely from one side to the other, whilst the other convolutions of the anterior lobes are placed longitudinally; it is the seat of melody or tune.

LANGUAGE.

There are some who have the lower lid very protruded; the eye appears to protrude the lower lid, and such individuals are very fond of languages. If you look into their libraries you will find a great number of grammars and dictionaries, and they can remember a great number of words and languages, and they seize the spirit of a language; they are good philologists. In the artificial languages we have a great many

words, but the words are arranged according to certain laws, as there are certain rules which regulate the other arts. In the composition of colours we find that there are certain laws which operate, and all things produced by nature are subject to laws. Colours do not depend entirely on our will, there are certain laws by which they are influenced, and to which we must submit. So we find in the arrangement of signs called language, there are generalities in all languages, as in the sciences. It is very important in studying the mind to see first what language is. I find a great deal of confusion among men who reflect on the human mind as to this matter, and I wish to call your attention to a few ideas.

First, let us see whether the powers can act, whether the individual feelings I have spoken of hereabout (on the upper and back part of the head), as the love of approbation, self-esteem, caution, love of offspring in man, can manifest themselves without any artificial signs. When I speak of a power of language, I mean by language in a general way, signs by which the activity of the mind is communicated to other beings. It is not always understood exactly to imply this; but we must try to separate the signs from the operation of the other powers. The individual powers I have spoken of may become active without having any signs by which to communicate their activity to others. In speaking of signs, I shall divide them into two classes, such as are natural, and such as are artificial. The next time I shall explain myself more fully as to natural language, but I mean by it this, as soon as the powers become active, external signs are employed by which to indicate that activity to other beings possessed of the same powers. But besides this natural language, there are other artificial signs employed to express the activity of the powers. The powers, therefore, in my opinion, may be active, without having artificial signs to indicate their activity. Many have written on the influence of the signs upon the ideas, but I think the ideas may produce the signs, and that there are natural signs by which the ideas may be communicated; but as man has also an intellectual sort of activity, he is not satisfied merely with natural signs.

The five senses exist in animals and in man, and the animals have things which are agreeable and disagreeable to them, as well as man; the same smells do not please all, nor the same touch. If you give them different things to eat, they will soon find out such as are agreeable; they will make a choice. So in their sensations they choose situations more agreeable to themselves, and a great many of them prefer heat to cold. We find the same operations of the senses in

man, but as he has a superior talent, and has intellectual powers, so he can gratify his senses in an artificial way; he prepares his aliments, whereas animals do not. Animals have a natural language, and it is really astonishing to hear some persons ask whether animals have a language. Animals place sentinels, and if they had not signs, how could they understand the approach of an enemy? Look at the dogs much attached to their masters, and they show their feelings plain enough by external signs. Animals have language, in the application I have given of the term; they indicate their feelings by signs, and they understand this expression of feeling shown either against or toward each other. If they place some as sentinels, the sentinels must have signs, and the signs of the sentinels can be of no use unless the others understood them; but I repeat that man, in addition to this, has intellectual powers, and he invents also artificial signs. But if beings are together, being deaf, can they insure an artificial language by adapting artificial configurations to the eye? Certainly they can, and we know what has been done for these unfortunate people in that way. Then there is the case of James Mitchel before mentioned to you; he was deprived of sight and hearing; was it possible to have given him an artificial language? Yet he expressed his anger, and several other feelings. He expressed his assent or objection to any thing by a nod and a shake of the head. I believe he might have been instructed by artificial signs, and it is a pity that it was not done. We see, therefore, that there are natural signs, and that there are arbitrary signs, and we find that there are some individuals who have a great facility in tracing them; the organ is placed very peculiarly, and I call it the organ of artificial language. The position seems very curious; it is placed transversely to all the powers we know.

I come to another organ, to one of the first discovered, and which to this day presents great difficulties, and is subject to many blunders; it is situated behind the eye. Dr. Gall had often observed that some children had a great facility of learning by heart; if they looked over a thing once or twice they knew it, and that other children were obliged to labour a great deal to be able to repeat any thing, and it is a great mistake to make children waste their time in making them learn by heart. There are some children and adults who have no great talents, and even almost idiots, who have good verbal memories. It is a great error in education to think that one talent gives another. Again, those who are to teach morality must calculate, and those who treat disease must calculate. There are some professions, certainly, in which calculation is

necessary, and there are others in which it is quite superfluous. So there are others who have a good verbal memory but no calculation, and there is a great number of such persons. Here is the cast of Jedidiah Maxton, a man educated in the country, and being brought to London, went to the play to see Garrick; he recollected the syllables, but the ideas of Shakspeare were not retained by him. We are too much addicted, from infancy, to learn words and attach no ideas to them; we are taught to repeat like machines. There are children who have good verbal memories, and Dr. Gall observed that such children have very prominent eyes; however, we see persons who possess good verbal memories sometimes in whom the eyes are not prominent.

There are some individuals who have the greatest difficulty in learning names. The mind invents names according to the activity of the powers; thus Individuality affords the substantives, names which express the mere existence of objects; then the powers by which we judge of the qualities of objects afford the adjectives. The powers which make us acquainted with the mutual relations and actions of beings supply the verbs; so that our arbitrary signs are the result of the activity of the intellectual powers. If, therefore, we have new ideas, why may we not invent new signs to express them? I come now to ideas of a superior order, and such as are of the highest importance to mankind.

COMPARISON.

By far the greater number of persons are satisfied with knowledge of the things around them. Tell them of enchantments, tell them marvellous stories, and they are amused; they do not like to go further, and it is not necessary for them. But others have a tendency in their minds constantly to compare; they are never satisfied with individual knowledge, they bring it up to a point and compare their knowledge; they compare the forms and localities of beings. Comparison is a high operation of the mind, and I speak of the power as reflective also, and this is what is commonly called reason. The number of those appears to me small who reach to comparison only. To compare is a great faculty; to point out what is analogous, and what is different, and what is commonly called discrimination of the mind is this power. Speak with persons, and you will see that some have a great faculty in discriminating and comparing their ideas, and others put all together, and have great confusion of ideas. If you look for the organization, look in the middle line of the forehead, at

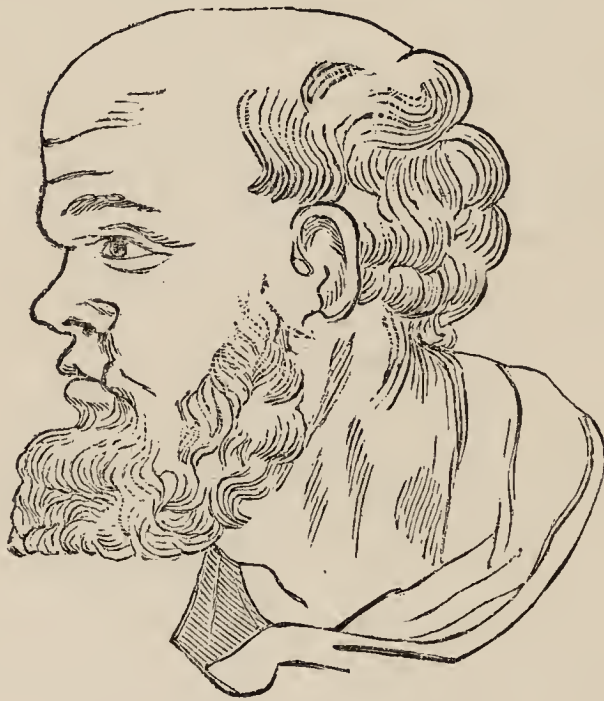
the upper part, just above Eventuality.* Those who quote examples, and compare what are analogous and what are not, and if, when reasoning, they say this is just like such a case, and then quote the case, a manner very effective in speaking to common people, you may be sure that this organ is well developed. If you know a preacher whose discourses take great effect upon common minds, you will see something going on here ; they have the power of bringing down, and comparing with common events, things which are even supernatural. It is impossible to comprehend what is preternatural ; it must be elucidated by what is natural ; and have we not seen that the Gospel has been propagated from the earliest times by this mode of reasoning ? If, on the other hand, people hear a preacher, perhaps a man of talent, and they will be ready to say, "Oh, what a great man he is ! What great volubility of language he has !" and so on. Ask them what he has been saying, what he has been preaching about, and they cannot tell. That is the result of his not bringing down to the capacities of his hearers, by examples, what he has wished to enforce. It is quite certain, that if you see persons in common conversation who are apt at quoting examples, and analogous cases, they are broad here.

CAUSALITY.

Comparison, however, is not the highest power, there is one still more important in its effect, it is Causality, We see, sometimes, from infancy, children who ask, why this, and why that ? There are others who never get up so high as to that why, or, as the ancient poet has said, "Of all things to trace up the cause." Metaphysicians have exhibited this power, and Dr. Gall called it "the power of metaphysics," but they go too far, they want to know too many causes ; the first cause of all things must exist, but we cannot arrive at it. We know the secondary causes ; we see them, we know them in the succession of events, and in relation to them we may observe and learn many things displayed by nature. We cannot invent or create causes, but we can observe circumstances under which events take place, and then we call these circumstances causes. We cannot do more than this, and if the mind could be convinced of this, and be contented with observing the succession of events, and the regularity with which they occur, we might be able to do many things. This power is important in every situation, not only to metaphysicians, who wish to dip into the first cause, but to every individual. Those who wish to

* In those in whom the organ is large there is a distinct ridge in the middle line of the forehead, between Eventuality and Human Nature.

account for events, and ask what is the cause of every thing, have the parts adjoining Comparison broad ; Comparison is in the middle, and Causality at the side of it, and you will see the organ large in all those persons who like to dip deep into their profession, whatever it may be, and make themselves acquainted with its principles. If you know an historian who writes the facts merely, without attending to the order of events, and makes one precede another when it ought to follow, such a man will be defective in this power ; but if you know an historian who, in a philosophical spirit, gives a well arranged concatenation of events, and reasons on them, you may be sure that he has this power. If you find, among the poets, men who dwell much on principles, this organ is full in them. Take Locke or any man who has, as far as the know-



SOCRATES : Causality large.

ledge of the times has gone, reduced the operations of the mind to principles, such as Milton, Harvey, Bacon, Watts, and Franklin, and you will find in all of them the organ is large. It is infinitely more developed in this country than in any other.

There are other operations of the mind which tend to speculation, and if the upper part of the forehead be developed without the lower, then the reasoning will be speculative, because it is not founded on fact. This is the case commonly in Germany, the upper part is larger than the lower, so that there is a great necessity for bringing all the powers into combination. If you see in common life a servant who has this part large, he will execute your commission, but you must tell him exactly what he must do. There are some persons who will reason very well, as long as they keep on subjects with

which they are quite familiar, but take them into other subjects, and they are quite at a loss. But to have common principles, common sense is a great thing, although it is really very scarce. Look at persons who have sound judgments, who can contrive and separate the various opinions in moral philosophy, and you will find them broad in this part. I know individuals who have great tact in phrenology, but they do not understand the principles, and I know others, it is true, who are acquainted with the principles, but who cannot arrive at the practical tact.

I have now finished the individual organs ; the next time I shall consider the signs which show us the activity of the powers. Having the powers, I wish to know how the activity of the powers is to be measured, and I said from the beginning that we ought not to speak of the activity until the powers themselves had been considered ; that the alphabet of the science was first to be learnt. The activity of the powers is marked by certain external signs, and these I have called the natural language. Since I am convinced that every thing given by the Creator is submitted to principles, that is enough for me to allow. What nature has done, what the Creator has dictated, is done according to laws. Every thing in nature is done according to principles, and we must see if the natural signs cannot be reduced to principles.

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THE *Lancet* observes that Professor S. Moos, of Heidelberg, influenced, we presume by the important results which have resulted from the attention of experts being directed to the colour perception of railway officials, and others whose actions are guided by coloured signals, has communicated to the *Zeitschrift für Ohrenheilkunde* the results of his observations and reading in regard to the causes and effects of deafness in railway officials, to which, he points out, railway accidents may not unfrequently be attributed. Dr. Jacoby found that in the course of ten years and a half no less than twenty out of a total number of eighty engine-drivers applied to him for affections of the organs of hearing ; of these, five had unilateral affections of the labyrinth, and fifteen lesions of the middle ear. Dr. Hartman, again, has found that the surrounding conditions have to be taken into consideration, drivers sometimes having to work their way through violent storms of wind, over ground that is hard-frozen, and through long tunnels, and that under these conditions hardness of hearing, which, however, is often only transitory, is apt to be established.

THE FACE AS INDICATIVE OF CHARACTER.

THE CHIN.

Closely allied to the power of Love is the power of Will. The one begets desire, the other purpose, and desire and purpose are so much alike, that it is matter of little wonder if some persons have not always distinguished the one from the other. The signs of these faculties are as nearly allied as are the faculties themselves. We have seen that the strongest desires or faculties of love act upon the chin horizontally, causing breadth and anterior projection. The faculties of will (for there are several), on the contrary, act upon the chin perpendicularly, causing length downwards. An acute observer can scarcely fail to see—especially when the idea is suggested to him—that will, or strength of purpose, is expressed in the size of the lower jaw, and that it is, moreover, expressed in its downward aspect. Observe, for example, the difference in this respect between these two faces (Figs. 84 and 85). Hardly anyone can fail to see in which deter-



Fig. 84.

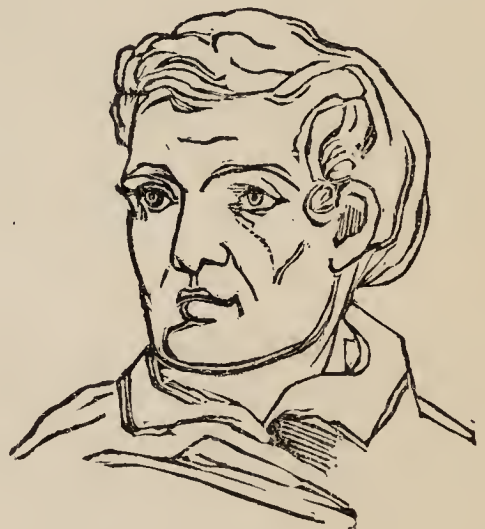


Fig. 85.

mination and power of will are expressed, and in which a fire and passion that are expended in the appearance of great things. While the one would be steady, purposeful, and always advancing from one accomplished work to another, the other would be for ever throwing his ardour into efforts that were no sooner conceived in heart than they were relinquished in indifference.

But these general expressions are the result of particular signs; for there are as many kinds of will, or ways in which will may show itself, as there are kinds of love. We will

describe them from the chin proper backwards. The first sign which will claim our attention is that of Engrossment, or the power of engaging the mind in a particular business or object of sense, so that thoughts and fancies may not lead the mind astray. It is indicated by the length of the chin



Fig. 86.

downwards, under the first incisor teeth, as shown in Fig. 86. A person with such a visnomy as this, is liable to have a material cast of mind, and not unlikely an infidel tendency, owing to his great engrossment in material things. He is well-qualified to pursue the study of the purely physical sciences, and to give a physical reason for every mental phenomenon to which his attention is directed.

The sign of this faculty may be observed large in celebrated anatomists, physiologists, and surgeons, as well as in great arithmeticians, and those noted for their absorption in physical research.

Next, backward of Engrossment, is the sign of Self-will, which is indicated by the length of the chin downward, under the canine tooth, as shown in the accompanying outline (Fig. 87). A large sign of this faculty betokens a person of great weight and solidity of character. This is one of the strongest faculties of the will, because it gives concentration and strength of moral purpose.



Fig. 87.

It may have evil for its effects, as when the general moral tone of a person is subservient to the selfish and animal propensities; but no really great character can be based upon an insufficiency of this faculty. Self-will must be clearly differentiated from Firmness, Resolution, and other powers of the will. Firmness is the power to resist opposition, as the oak resists the force of the storm. Resolution the power to act upon and affect external things. Self-will, however, gives the wish and the power to strike a course of one's own and carry it out; it is the I-will-do-as-I-like faculty, and its action is entirely in accord with that expression. When large it is a check on the impulsiveness of the erotic qualities.

Perseverance is indicated by the length of the lower jaw downwards, just under the second large molar tooth, or about the middle point of the jaw, as shown in Fig. 88. One who has this sign large is persevering in his undertakings, and

never rests until he has finished. It is the faculty of taking pains, and to one with ambition and intelligence it is a better birth-gift than a silver spoon. The sign is invariably large in great students, naturalists, astronomers, mathematicians, and in all those who act upon the principle that *perseverantia omnia vincit*.



Fig. 88.

The faculty of Resolution is indicated by the length of the lower jaw downwards, under the incisor tooth, and just forward of the angle of the jaw, as indicated in Fig. 89. In the next figure (90) it is represented small, as is also Perseverance. The two signs generally go together, though not always. One who has the sign of Resolution large he is very energetic; if he has the sign of Perseverance also large, he is quite efficient. One with the signs as small as they are represented in Fig. 90 has neither energy nor efficiency; he will "resolve and re-resolve and die the same." One almost insensibly feels the deficiency in the character: it is not unamiable, but it is weak. In a person with such a jaw as

that indicated in Fig. 89, on the contrary, there may be unamiable traits, especially if not accompanied by a large proportion of the humaner elements of the mind. When such is not the case we may expect a rude, harsh, and possibly violent character, as in the criminal type, represented in Fig. 91. There we have a combination of the violent in the amative propensity,* with the violent in the faculty of Will, accompanied by a very small relative development of the moral faculties.



Fig. 90.

Nearly allied to Resolution is the quality of Love of Responsibility, indicated by the limb of the lower jaw in its length downwards from the ear. This sign is just backward of the sign of Resolution. One who has it large likes to be in responsible positions, and if he cannot have the real thing, he is satisfied with the show of it. He never allows a chance to escape him of airing his authority, however brief, and he never bates one jot of his dignity.



Fig. 89.

* See the MAGAZINE for February, page 57.

Before quitting the chin and jaw one other sign must be



Fig. 91.

noted. It is that of Abstraction ; so called by Redfield, who locates it between the signs of Self-will and Perseverance. It is indicated by the downward length of the chin under the two small molar teeth (see Fig. 92). Dr. Redfield's definition of the faculty is that it gives the power of abstracting the mind, or of removing it from external objects, so that they have not the power to distract the attention, and is exactly the opposite of Engrossment. One who has a large sign of Abstraction can give his attention to anything requiring

thought and reflection, without being much disturbed by company, sounds, and other things which strike the external senses. He is very much inclined to meditation, abstract ideas, and philosophical principles (rather than to ocular demonstrations), to the indulgence of fancy and imagination, and to absent-mindedness ; not unfrequently even to a visionary tendency of mind. As this faculty turns the mind inward, it enables us to study our own minds, and to call into exercise those faculties which have relation to morality and religion, and to spiritual things in general. The sign of it is large in metaphysicians, logicians, clairvoyants, and visionaries ; and larger, as a general rule, in studious and sedentary people, than in those engaged in commerce and manufactures.



Fig. 92.

TO THE ROSE.

Ever in her lap maternal,
 Lovely queen of garden fair,
 Thee and me doth still, eternal,
 All reviving nature bear.
 Rose ! our beauties fade away,
 Storms surround us with their gloom,
 Yet the germ that lives for aye
 Soon unfolds in fresher bloom.

PHYSICAL EDUCATION.

There is a story in the Arabian Nights' tales of a king who had long languished under an ill-habit of body, and had taken abundance of remedies to no purpose. At length a physician cured him by the following method :—He took a hollow ball of wood and filled it with several drugs, after which he closed it up so artificially that nothing appeared. He likewise took a mallet, and after having hollowed the handle, and that part which strikes the ball, he enclosed in them several drugs, after the same manner as in the ball itself. He then ordered the Sultan, who was his patient, to exercise himself early in the morning with these rightly-prepared instruments till such a time as he should perspire, when, as the story says, the virtue of the medicaments perspiring through the wood had so good an influence on the Sultan's constitution that they cured him of his indisposition, which all the compounds he had taken inwardly had not been able to remove. This Eastern allegory is finely contrived to show us how beneficial bodily labour is to health, and that exercise is the most effectual physic.

The history of gymnasiums dates back to just before the time of Hippocrates, who made them a part of medicine—as a means of counteracting the evil effects of increasing luxury and indolence. But health deserves a niche in the temple of the virtues rather than in the apothecary's shop ; it is not solely dependent upon what kind of medicine we take, neither is it altogether attributable to what we eat and drink, or avoid ; for health is governed by other laws than these alone. Hence a complete system of gymnastics was formed, and public buildings were erected, called gymnasia, for the purpose of giving thorough instruction in various exercises. The first gymnasia were built by the Lacedæmonians, and after them by the Athenians, who erected three in the immediate neighbourhood of their city. In one, called Academia, Plato was in the habit of holding conferences with his pupils ; in another, named Lyceum, Aristotle taught ; while a third, called Cynosarges, was frequented only by the plebian orders. Those built by the Romans were most splendidly fitted up, with baths attached, and every kind of exercise, including dancing, was entered into with spirit. As a monument of the excellence of their mode of life, the Greeks have handed down to us a list of great men who lived to great ages, such as has not been equalled by any state of any population in an equal time, nor by any state of equal population in any time. Their theory of health and happiness was the equal develop-

ment of mind and body. They carried out their theory in practice, and the conclusion that they attained a higher standard of physical health than had been attained before or has since seems to be inevitable.

The duration of the prime of life, according to Herodotus and Plato, was ten years longer among the Greeks than is conjectured by our modern insurance companies. The Greek ideal of the human figure was such as is seldom seen now. The constitutions of the past few centuries have not grown stronger through men putting a less value upon physical education than the Greeks. The same causes which tend to make a people long-lived and strong, tend also to make them good and great, and to call forth all the active virtues. Xenophon is not alone in recommending gymnastics: other ancient authorities followed him, as they have been followed by the great promoters of physical education in modern times, Locke, Rousseau, Campe, Basedow, Pestalozzi, Saltzman, Fellenberg, Voelker, and Jalin.

Mercury was the god of eloquence, of music, and of the athletic exercises. Here we have a god of versatility, who is the god of the gymnasium. We cannot say this of the men of to-day. Men of intellect who are our best judges keep their muscles in the back-ground in practice, but they are at least athletic in theory. Ask them what is health? and they are practical enough to answer you: "The even-balanced activity of every part of the system." They give us good precepts if they do not set us a good example. It is almost incredible that men who know what health is, and who must therefore be supposed to know its value, should deliberately turn their backs upon Hygeia's altar and offer sacrifices in the temple of ambition. A man who loses his activity between twenty and thirty loses it for ever; he may regain a portion, but not the whole. But if the habit of inactivity grows rapidly, the habit of activity grows almost as fast and takes root more deeply. One has only to experience the delightful sense of half-fatigue which follows upon wholesome exercise, the sense of buoyancy which belongs to the chest after the lungs have been brought well into play, the state of the body which converts hard fare into a sumptuous banquet, and a hard bed into a most luxurious couch, the sweet sleep that gives redoubled strength to limbs after a good day's work, to understand that it is the *far molto* which makes the *far niente dolce*.

One writer suggests that if our convicts were sentenced to seven years on their backs with no exercise except that which is necessary to convey food to the mouth, instead of "hard

labour," it is more than probable that the punishment would be greater and would even amount to cruelty, and its execution would probably kill the man by slow torture. It is generally the stimulus that is wanting that causes many to be indolent. Having a motive the most idle will very often show a surprising resolution and determination of mind and body. A stimulus of a physical nature is often more necessary than a mental. The gymnasium that was called an exotic twenty years ago is that no longer; still the bodily powers are not thought any too highly of. To make exercises pleasurable one must have interest in them. It is impossible to derive pleasure from muscles in a state of atrophy. When the pleasure of muscular activity has once been known it is not likely to be forgotten. It is one of the greatest pleasures, for a stimulus is given to the blood, and hence improves the circulation; it increases the action of the lungs, and hence fills the little air-cells with deeper and stronger inhalations; it oils the muscles of every part of the human frame, and makes their action no longer a duty unless it be a pleasurable one.

Why has nature been endowed with such an activity in the limbs and a pliancy in every part of the body if it is not necessary for our well-being to exercise each part in various compressions, extensions, dilations, and all kinds of motions? But the muscles are too often looked down upon with condescension, while the mind has full sway. The direct effect of physical education is to give elegance of form, grace of bearing, and decision of character. It teaches the art of acting, and of acting rightly, without hesitation. The character of an individual must be influenced by physical exercise. If it simply act indirectly upon the system by improving its general tone, it has an undeniable influence over the moral and intellectual faculties, giving them a tonic they would receive in no other way. The muscles make the mind think, while the mind makes the muscles work. Each stimulates and employs the other. General breadth of character seems to be consistent only with general and well-balanced development of all the powers, both muscular and mental. In a few exceptions this is not attainable. But it is surprising to notice the improvement in individual cases of deformity where well-directed exercises have given a new lease of life: for deformities induced by weakness or idleness—such as round shoulders, knock-knees, curved spine, stooping form—will all be amended by the action of the muscles, which tend to draw the deformed parts into their shape and place. The train of evils which must inevitably follow upon their neglect

would, if calmly reflected on, appal the bravest of us. It seems hardly possible to resist the conclusion that sound bodily health is a virtue, and that physical exercise is one of the modes of practising it.

All the virtues belong to one great family, and there is no reason why health of body should not be held as one of the highest. Bodily health is only a part of a great whole, and each of the other virtues is only a part of that whole. Every cause is in its turn an effect—every effect in its turn a cause. And at the present day the continual cramming for competitions saps not only the brain of its energy, but also the body of its strength and proper growth. And when the body sends up word to the brain, that “there is no more strength or vitality left,” then at least the mind realises its own helplessness apart from a sound physical organisation.

Herbert Spencer has truly remarked that “already thousands are breaking down under the high pressure they are subject to; and if this pressure continues to increase, it will try severely even the soundest constitutions. Hence, it is becoming of especial importance that the training of children should be so carried on as not only to fit them mentally for the struggle before them, but also to make them physically fit to bear its excessive wear and tear. For girls as well as boys the sportive activities to which the instincts impel are essential to bodily welfare. Whoever forbids them forbids the divinely appointed means to physical development.” Health is a beautiful example of the dependence of all things one upon another. That one nation depends upon another nation for mutual strength is a recognised fact; that one generation depends upon another is an accepted truth. And it is easy to understand that it is for the interest of the individual that the mass should live well. As the country revives the exhausted towns and cities with health and strength, so the healthy constitution gives inspiration for continued brain work.

There is nothing which tends more to produce a want of sympathy in others than long-continued ill-health. There are exceptions where one finds a contented and peaceful mind joined to a helpless and pain-stricken body, but, as a rule, brain, heart, and muscles act fitfully and feebly under the shadow of discontent, but strongly and regularly in the sunshine of contentment. Physical activity nullifies the pain of the heart, and the weariness of the brain, and it is the anodyne, especially where the mental strain has been very great. The man who knows how to use his muscles has always an infallible remedy for trouble, excitement, or fatigue of mind. And ladies who are highly nervous, susceptible, and tender

by nature, or given to despondency, should know this effectual specific, and instead of increasing ennui by continued lassitude, they should work out the opposite remedy,—physical exertion. Who has not experienced the acute sympathy of the mind for the body, or the body for the mind, when either suffers?

The knowledge of gymnastics, for towns and cities, is getting beyond the few, and one hears frequently of parlour gymnasiums, which certainly shows a step in the right direction for physical culture where we cannot have the open fields and country air. The time was, and not far distant, when the word exercise was alone applied to oarsmen and cricketers, to the members of the army and navy; but the benefits of a sound, healthy body are too potent, and public opinion is becoming more favourable to a man's living out his threescore years and ten, and more willing for the "coming man" to be sounder and stronger physically—therefore mentally. Every kind of reform which is to secure a permanency must be slow and gradual in growth, the same as is the growth of all the most lasting things in nature. Hence the adoption of the theory that physical exercise is important will be gradual.

Scientific men are throwing out hints that strength of body lays the foundations of all other strength. Doctors are realising that, as moral and intellectual power gives beauty of features, so bodily power gives grace, elegance, and beauty of form, and neither can be said to be complete without the other. While savages have always been prone to set the highest value upon mere bodily vigour, civilised nations are prone to fall into the opposite extreme, and forget that man's physical progress should keep pace with his mental. Civilisation does not consist alone in the cultivation of our minds, and the elaborating and perfecting the machinery of our everyday lives, but it also involves the cultivating and perfecting of our bodies. Is it right that we should be behind the savage in regard to health and strength when we have had the experience and the teaching of all ages? Exercise of any kind is worthy of thought, reason, and consideration, for you must observe facts, causes, and effects, and study the structure of the body, as well as its application. The early history of all great States is a history of struggles and victories. And victories are not gained without strength and courage; nor are strength and courage found where there is not sound bodily health. The increase of labour-saving machinery has tended to lessen the hours of work, and, with the introduction of machinery, Mechanics' Institutes have been established, to provide increased leisure with suit-

able entertainment. If bodily exercise is cut off by the introduction of machinery, and Mechanics' Institutes supply food for the mind, what will build up the physical force and energy to balance this state of things?

A thoughtful writer has suggested a worthy idea to help us out of our dilemma. He says, "It is a praiseworthy idea to endeavour to make philosophers and politicians from mechanics, as well as from any other class, but would not that object be made easier of attainment by a little attention to men's lungs and blood, by forming a gymnasium by the side of every institute? Would not a little increase of circulation help on the comprehension and formation of ideas? Experience is beginning to show that even with the weariness of a day's close attention to work, bodily exercise can bring relief as certain as the sun shines and gives heat." It may seem difficult to some, with society constituted as it is, to perfect their manhood and womanhood with regular and well-balanced activity, for there exists a great admiration for what is called "becoming langour." But, instead of grumbling about the state of society, if those very persons would go to work and reform society, by popularising physical culture in a similar way as figure skating was once made popular, they would bring about a consummation greatly to be wished. Every ladies' school or college should have attached to it a light, well-ventilated room, suitable for light, free, muscular exercise.

J. A. F.

THE REASONING FACULTIES.

In my last paper I explained the Perceptive Faculties, and showed that they had to do with the physical world, with objects and things, and their qualities. In this paper I shall treat of the Reasoning Faculties, which enable us to think, to compare, to trace out cause and effect, to understand the principles or laws of things, and the relations they sustain to each other.

There is a tardiness in the reception by what are called the educated of the important and practical truths of phrenology which is surprising to the unbiased mind. Its truths have been received and cordially embraced by nearly all minds of ordinary intelligence that have investigated the subject; and its undoubted value to mankind should have secured for it a thorough investigation by every intelligent person. It unfolds the laws which govern the human mind in relation to the physical world, to man, and to the Creator. If success in his

dealings with the physical world be the main purpose of his mind—if all he lives for is to get rich—phrenology steps in and shows him how to cultivate and strengthen his powers. If he desires to be a whole man and to do his whole duty, phrenology points out distinctly the way for the proper education of all his faculties. It alone can light the path to a just and true education of the whole man, moral, physical, and intellectual.

Why is there this tardiness in receiving truth in regard to the laws which govern our own being? We do not dispute the power of electricity to carry news round the world almost with the quickness of thought, the power of steam to increase locomotion, and the many other physical discoveries of the century. Why do we discredit the greatest discovery of modern times in regard to man himself? Is it because no moral consequences are directly connected with those subjects and are with this? It would appear as if such were the case—as if, because some of the deductions capable of being drawn from it were at variance with preconceived notions, it must be denied all claim to truth; as though a true thing were not true whether we like it or not, and would have its influence as a true thing even though we should disbelieve it. There are two things which are at the root of the common disbelief in phrenology, one is ignorance, the other pedantry. If phrenology had been a baseless theory sanctioned by the name of the Pharaohs, it would have been to-day honoured in the schools. However, the truth can wait.

There are certain faculties of the intellect which hold a sort of intermediate place between the purely perceptive and the purely reflective powers. Tune is one of them. Tune has to do with sound and with music. It is allied to Language. A speech with the proper emphasis is ten-fold more forcible than without it. To talk straight along in one strain, upon one key, without modulation of voice, not varied in tone by the passion or sentiment it may express, would be to destroy all the beauty and a great share of the effect of a discourse upon the mind. If perceptive intellect only is involved in the story, you may tell it all upon one key, and all will be well enough. But as soon as we ascend to discourse in which the reasoning faculties are exercised and passions or sentiments are brought into play, if Tune has a proper influence upon the mind, every word is uttered in harmony with the dominant idea, passion, or sentiment. Rage has a tone and a key different from affection; and there is a difference between the tones of the voice in scolding and talking to a sweetheart; between addressing God and threatening an enemy under the

influence of Combativeness. Real oratory consists in a correct modulation of voice—in the right kind of emphasis.

The faculty of Tune teaches us how and when to emphasise. It is exercised in conversation, reading, and speaking, as much as in singing; and there is as much music, if we will bring it out, in conversation as in singing. Tune, combined with Constructiveness, Ideality, Imitation, Time, Weight, and Comparison, gives the power of making and performing music. Tune and Time, with the sentiments, and of course the proper construction of the organs of the throat and lungs, give the talent to sing. Everyone should cultivate this talent. Children especially should be taught to sing. If singing in families were more cultivated we should have happier homes. Singing people do not generally scold much—those I mean who sing about the house about their ordinary business. If you feel in a scolding humour begin singing, and you will be sure to change your state of mind. If you have a scolding wife send her to singing school right away.

Time. We have day and night; fall, winter, spring, and summer; the bud, blossom, fruit growing, and fully ripe, and the leaves falling from the tree; we court, get married, children are born, and we lose companions and friends. These are all times in nature, and of these the faculty of Time takes note. There are also artificial divisions of time. It is easy to remember that such a thing happened when the leaves fell or the buds opened, when we were young, when we were married, &c. Time is exercised in music, and is an improvable faculty.

Locality is directly over Weight and Size, and gives the arch of the eyebrows a heavy appearance. It gives a knowledge of places, their location, where they are. It gives us a knowledge of the geological and other natural divisions of the earth. It enables the squirrel to run far from his hole and return directly to it; the bee, at whatever distance, to take a direct line to the hive; the dog to go into the woods and make ever so many turns, and then to go home in a right line. It is sometimes greatly deficient. It can be cultivated in children by having them go out and in, and from place to place, and return by themselves. It is important to travellers, and they usually have it largely developed, as such a development gives a love of observing localities. It gives them accuracy and ease in the description of the scenes of their travel. I once examined the head of a man who had this organ largely developed; I told him he must be a lover of travel, and had great power of delineating the scenes he had witnessed. He asked me if I did not know him; I told him I did not. He said he was Stephens the traveller.

Eventuality is in the centre of the forehead, and a hollow will be found there in persons whose memory of events is imperfect. It was intended that we should remember all that transpires under our observation ; that we should live in the light of our own experience, and derive wisdom and counsel from the events of our lives ; and such would be the case if we lived as we ought to live,—if we were strictly temperate, avoiding all excesses, and were regular in our habits. I could easily suggest how some have lost their memory. John Quincy Adams was a man of extraordinary memory. He could, even to the day of his death, recount events that occurred fifty, sixty, and even seventy years before. No man was more distinguished through life for regularity of habits than John Quincy Adams. He also paid attention to whatever he heard or said, and his mind was a storehouse of facts. He always listened with an intention to remember what was said ; and he remembered it. Those who are up late one night and to bed early the next ; drunk on the sofa one day and sober the next ; all strung up with excitement one day and relaxed the next ; such persons cannot have a clear and strong memory of all the events which transpire under their observation.

Eventuality is active in children ; they are teasing you from morning till night to “tell them a story.” You can govern children better by a story than by a rod ; and you can instruct them better by a story than in any other way. Amuse children with stories ; never be done with telling them ; but let them be drawn from the limitless stores furnished in the history of man and the whole range of natural history. These stories are quite as entertaining to children, and at the same time give vigour to this faculty and to others, and stores the mind with valuable knowledge.

Constructiveness is an intellectual faculty, and is situated upon the side of the intellectual lobe. The bear and the beaver have Constructiveness large ; but man has Ingenuity added to Constructiveness. There is no limit to the powers of the mind, acting in harmony with the wants of man. Constructiveness combined with the perceptive faculties and Concentrativeness gives inventive talent—the power of invention. Combined with Colour, Form, Ideality, and Imitation, it gives the talent for painting, and, with a strong muscular temperament added, for a sculptor. Combined with Ideality, it gives a desire to perfect, and a fondness for the beautiful in art. This faculty is not cultivated enough in children. They are not instructed to make things. There ought to be in every school a place for drawing, for manufacturing, no matter

what, but to secure exercise of this faculty, by having children make something. They will be happier at the time, and far more useful through life. Instead of doing mischief, they would be constructing articles, the beauty and ingenuity of which would be pleasing to their friends.

God designed that every faculty should be exercised ; He did not make a blunder by conferring upon any individual superfluous faculties. Hence, no man is educated who has a power not properly trained. This may seem very strange to some ; but investigation and thought will show them that it is a conclusion to which science and philosophy directly lead. The difficulty is and has been, that education has not been based upon any settled philosophical system ; upon a theory having its foundation in clearly ascertained facts. There is no system of the philosophy of mind, save that furnished by phrenology, which has any pretensions to be an inductive system—to be founded upon the wide and patient observation and comparison of facts. There are no two writers upon the human mind, not phrenologists, who agree. And how could they be expected to agree ? or rather how is it possible they should agree ? The system of each is necessarily founded upon the relations which human actions—all the various manifestations of the mind—sustain to his own judgment, perception and consciousness ; and as judgment, perception, and consciousness in no two human beings are alike, it necessarily follows that as these writers differ in these particulars, so will the system of mental philosophy produced by them differ. And each will insist that his own system is true, and each will have just as many advocates, as there are persons whose mental constitution harmonizes with his own.

I now come to a consideration of the Reasoning Faculties. They consist of Causality and Comparison, and are located in the upper part of the forehead, and when large, cause a prominent development in that part. We reason, analogically, and ascertain the relation of things by the faculty of Comparison. The faculty of Causality enables us to trace out the relations between cause and effect, to ascertain natural laws—the principles of things.

Classification is performed by the faculty of Comparison. When shown a fin we know what kind of a fish it belonged to, by our knowledge of that kind of fish, and by comparing the fins, and so of the wing, or foot of a bird. We are shown the tooth of an animal ; and if we are good naturalists can tell whether it belongs to a carnivorous or a graminivorous animal. It was by the exercise of this faculty that Cuvier made such unprecedented progress in classification in Natural History.

Men who have large Comparison, and large perceptive faculties, are your "common sense" men.

Causality ascertains certain bearings and relations of facts so far as cause and effect are concerned. Franklin had this faculty large. He was a thinker—not disposed to take the views of others as his own. It was this faculty which led him to originate the idea of drawing lightning from the clouds. It was a bold thought; and when he had secured a single bottle of lightning, he thought he had done a great deal—and so he had. No man but one with the originality which is given by the large development of Causality would ever have thought of putting lightning in a bottle.

Causality investigates the primary cause of things, and their laws. Persons deficient in this faculty do not well or readily understand the natural laws relating to any subject—they do not get hold of high principles. It leads children to ask "*why*" things are so and so. When children ask questions, put them on the track, so that they will imagine they contrived the answer themselves. It secures the exercise of Causality. Causality, combined with the perceptive faculties, Ideality, Imitation, and Constructiveness, gives the power of designing, in painting and sculpture.

Wit, or Mirthfulness, properly belongs to the intellectual faculties. This faculty gives us that sense of things which induces Mirthfulness. There is as great a variety of opinion as to what Wit is as to what is poetry. Franklin was a wit. What he said a hundred years ago is as witty to day as it was then, though so often heard; and it will remain so to the end of time. This is genuine wit. This faculty, combined with large Combateness, gives personal remarks—"sharp cuts," which hurt, and which by some are mistaken for wit. Sheridan was recognised as a witty man. This organ in him was only moderately developed; and this was pointed to as proof of the unsoundness of phrenology. But when it was found that most of the caustic, biting, stinging things put forth by him were only copied from other sources, with the language and dress changed, so that they appeared to be original, and that before he spoke, they were carefully conned over, a lower estimate of his powers of wit was made. He had prodigious Eventuality, immense Combateness and Destructiveness, and a preponderance of the nervous system, which gave the capacity for narration, and peculiar pungency to all he said.

Wit is located immediately between the emotions and the intellect. If exercised in harmony with the back part of the head, the wit will be of the character of the faculties there located, and if with the front part, the jokes will be intellectual.

If all the powers are well developed, then a man's humour will be genial and generous and pleasing. Some are witty only when excited. A man with this faculty and Alimentiveness well developed, will joke at table—Alimentiveness is excited. Ministers should be witty. It is an element of success. I will venture the assertion, that no successful Revivalist was ever known, who was not a witty man. Spurgeon is a very witty man. He will wake up an audience, get their minds aroused by a sally, and then send the truth home with success.

Mirth begets mirth. It is the best thing to preserve health. It can hardly be maintained without it. Instead of a doctor, have a hearty laugh, and often. It is cheaper, does more good, and leaves you in better condition. It is not wrong to be mirthful. The faculty was given to be exercised, and for wise ends. It exercises a greater power over our bodies and minds than is generally supposed. Its free exercise promotes respiration and digestion, and gives tone and vigour to the action of all the vital organs. It is not necessary usually to encourage the exercise of Mirthfulness, but to see that it is exercised in the right way by jokes that will exert a good, instead of a bad, influence.

There are two other faculties which pertain to the intellect: Human Nature and Agreeableness. The first is situated above Comparison, the other above Causality. The faculty of Human Nature gives the power to perceive motives and to study character. A person with it large is naturally inclined to investigate mind and to delight in the analysis of character. It is a very important faculty to those who have to govern or influence men. No one can be a good judge of men without it. Agreeableness gives a youthful, pliable, playful tone of mind. It is invariably large in those who are youthful and buoyant in old age, and small in children who are styled "old fashioned."

L. N. F.

THE EFFECTS OF TOBACCO.

In the present day, we can calculate with precision the exact time, to a minute fraction of a second, which is required to transmit a message from the brain to the hand, or any other portion of the body; and it has been distinctly shown that it takes much longer to send such a message after the person experimented upon has taken even a small dose of a narcotic. A message which could be sent in 0·1904 of a second, required 0·2970 of a second for its performance after two glasses of hock had been administered to the subject of experiment, thus showing how much even a slight narcotic

interferes with the vital action of nervous tissue. The same effect is produced by tobacco. Tobacco prevents waste of tissue, and thus enables a man who smokes to live on less food. This is considered a very strong argument in favour of the pipe ; and if good food could not be obtained, it might have very great force. But plain, wholesome diet is cheap and easily procured. Moreover, "waste of tissue" is an expression which conveys an utterly false impression. There is no such thing as waste of tissue, unless the body is wearing away more rapidly than new substance can be reproduced, as in certain fevers, consumption, &c. The tissues of the body are not a fixed quantity, like the frame-work of a steam-engine ; they are ever changing, the old wearing away to be replaced by the new. Life is a constant series of changes, and the healthier the man the more rapid, within certain limits, will be his change of tissue. You can only preserve the tissue of a healthy man by lowering his vitality ; the tissues thus preserved cannot bear the strain which can be borne by those of recent manufacture, and thus the working power is diminished. An employer of labour in Liverpool, anxious for the elevation of his workmen, suggested that they might with advantage give up the use of beer and tobacco. They informed him, however, that in such a contingency their wages would not support them, so great would be their increase of appetite. But there is another side to this question, and it is, that such men would be able to do more work, and consequently earn larger wages, by discontinuing the narcotic. Men of all classes are very slow to learn that sound bodily health is the best possible investment. The human machine is very easily kept in order, but once let it get out of repair, and it is most difficult to set right. And it can only be kept in thorough repair when every joint, muscle, and nerve is maintained in a condition of persistent activity. I do not mean that a man should always be engaged in exercising his various tissues and organs in order to preserve health ; but I do maintain that every tissue should be so actively exercised that it will be compelled to employ its entire time of so-called rest in laying up fresh stores of explosive material, and in healing up those rents which have taken place in their actual substance. In the region of nerve and muscle a man ought always to live up to his income. He can save nothing by sparing exertion, so long as he does not go beyond his income. Give your brain sufficient food and an abundant supply of oxygen, and then give it a fair amount of good hard work every day, if you wish to maintain it in a high state of healthy activity. Barristers and clergymen, who use their brains

much, are the longest-lived men in the country, showing plainly that regular brain work is good for the general health as well as for the efficiency of the nervous system in particular. The muscular system must be treated in a similar manner, if you do not wish it to become subject to fatty degeneration. An unused muscle shrinks, and becomes soft and flabby, presenting an appearance of marked contrast to the brawny arm of the blacksmith. Instances of the feebleness of tissues thus preserved frequently present themselves to the notice of the surgeon. A muscle is called upon to perform a vigorous contraction, but it snaps in the effort. The heart itself is sometimes torn asunder in attempting to send an extra supply of blood to some needy limb. No man can afford to lower his general vitality for the sake of mere idle gratification. He never knows when he may require all the energy which can be stored up in his tissues. A railway accident, a runaway horse, a run to catch a train, a fall on the ice, or even a fit of coughing, may bring a life of misery or an early death to one who would have passed unscathed through them all, had he allowed his nerves and muscles to wear away in vigorous activity, instead of carefully preserving them, like smoked bacon, in the fumes of tobacco. I do not attempt to deny that all narcotics possess the power to prolong life in the absence of food. I have elsewhere referred to the case of an old woman who lived for two years on opium and gin-and-water, without any food whatever, but she might as well have been in her grave. Hers was, I would not say a living death, but rather, a dead life. Some may be inclined to doubt the accuracy of this story, but such will discern a possibility of its truth when I say that a narcotic seems to produce a condition of the nervous system closely resembling that of hybernating animals. The dormouse sleeps for many weeks without any food whatever. Its tissues are then in the condition of the cook's fire when covered with ashes, and if you can produce a similar condition in the human tissues, you may attain the same result of prolonged fasting. We are apt to consider the winter sleep of the dormouse as a great waste of existence; but what can we think of a reasonable man who artificially reduces himself to a similar condition during a considerable portion of the prime of life.

Tobacco soothes the exhausted and irritable nervous system after a hard day's work, and prevents the brain worrying about difficulties that may never come.

The advocates of tobacco maintain that in this manner it gives rest to the nervous system, and thus enables it to throw off work for the time, and resume it again with renewed

energy. Now the mistake which our opponents make here is, that they ignore the necessity for anything but rest. What would you think of the farmer who allowed his men an hour's rest at various intervals during the day, but who, at the same time, forbade them to take food at such times, lest the muscular movements involved in carving and mastication should interfere with their complete and absolute repose? Every cell in the body is a counterpart of the whole organism. Just as the man cannot work without eating, so the cell cannot carry on its explosive action without fresh supplies of explosive material. Now, tobacco and other narcotics not only prevent the nervous matter exhibiting energy, they also prevent it absorbing its proper food ; so that the rest which it obtains by means of narcotism does not enable it to resume work with renewed energy. But more, the nervous matter is thereby rendered incapable of throwing off its own ashes, which are its most deadly poison. Just as decomposing animal matter is highly deleterious to the health of the body, so the dead portions of nervous tissue become disastrous to the life and activity of their living successors. I do not attempt to deny that the relief afforded by a narcotic is most delightful and seductive. When the merchant goes home from his office, worried by a thousand trifles, and saddled with a load of cares, his nerves are agitated and restless, and the busy wheels of life seem to spin round with unceasing velocity. How delightful it is to be able, by the magic spell of tobacco, to stop those busy wheels, and to translate himself from the pains of a commercial pandemonium into the Elysian fields of perfect bliss ! I confess that tobacco does all in the way of soothing that its admirers attest ; it is my duty, however, to exhibit the other side of the shield, and to proclaim that the luxurious pleasure of the pipe is physiologically so expensive that the nervous system cannot afford to indulge in it. The muscles suffer along with the nerves ; for without nervous influence the muscles are unable to supply themselves with the nourishment which is carried by the blood into their very substance. If you cut the nerves leading to a muscle, that muscle will cease to retain its firmness and contractive vigour, and if you paralyse the same nerves by a narcotic, its power of contraction will be similarly diminished. Any smoker will tell you that much smoking is a hindrance to severe muscular exertion. If a man has lit his pipe, you are more likely to find him dreaming in a corner than ascending a mountain. When you observe what an amount of lounging lethargy is induced by tobacco, you scarcely require an ounce of science to account for the smaller appetite of the inveterate

tobaccophile. This power of the narcotic to interfere with the nutrition of the tissues produces serious consequences on the digestive organs of those who both smoke much and eat well. The smoker is often not content to suffer any diminution of the pleasures of the table as a result of his pipe. He therefore uses a variety of agents to induce in his digestive organs an artificial appetite. He is thus led to consume a much larger amount of nutritive material than can possibly be required by narcotised tissues. This nutritive material produces injury either to the stomach or liver—very frequently to both. The stomach is burdened with more work than a smoker's stomach can perform ; hence the dyspepsia so frequently accompanying the pipe. The liver is doubly burdened. Its duties in connection with the food are many. It assists to prepare nutriment for nerve and muscle, and if such nutriment is not required, its further duty is to break down such rejected nourishment in order that it may be more easily expelled from the system. Hence the biliousness and other effects of liver derangement so common in the smoker.

Tobacco destroys the physical conscience.

My greatest objection, as a physician, to the use of tobacco, is, that it destroys what I have ventured to call the physical conscience. The entire body is supplied with minute nerve twigs which, in the healthy man, are maintained in a highly sensitive condition. Their function is to inform the brain when any derangement is taking place in the ultimate tissues. This network of nerves occupies a similar position in relation to physical health that the conscience does in relation to the moral condition. Whenever any muscle has difficulty in contracting, a message of the fault is at once transmitted to the brain. The same occurrence takes place when the stomach has difficulty in digesting its contents, when the liver is overburdened with excess of sugar or bile, and when the brain is being overtaxed with daily toil. These messages produce great uneasiness to the subject of their influences, just as a troubled conscience does in the mind of its possessor. Now, there are two ways of avoiding the inconvenience of the physical conscience, just as there are two ways of avoiding the pangs of a smitten moral conscience. You may either do what is right, or you may lull your conscience to sleep. Tobacco enables a man to deaden his physical conscience, and thus he may go on ruining his health without knowing it, until he is beyond the hope of recovery.—*Knowledge*.

MY GOOD LUCK.

CHAPTER I.

TWENTY shillings a week ! and board, lodging, tailor's bills, everything to be paid out of it. Hard lines, were they not ? Yet such was my income ten years ago, though I was a man of twenty-five years of age. And there are thousands like me, intelligent, well-educated, cultivated men, and yet with little or no prospect of anything better. No, it is no enviable position—that of a clerk. A few of the more favoured, or more pushing ones, get on, and do well ; but for one such, there are twenty that have not the slightest chance. They may be painstaking, punctual, scrupulously honest ; yet it is all the same. Clerical labour is cheap ; the market is glutted with it. In most cases a boy will do the work as well as a man ; and so, when you are no longer a boy, the probability is that your employer would, on the whole, prefer that you should go. He would put a lad in your place, and gain by it.

Such was my situation. I had been in the place for ten years, and my wages had gradually risen to the magnificent sum of a pound a week : beyond that they did not advance a jot.

When at school, I had often heard the praises of punctuality, perseverance, and politeness ; and I had determined to practise them, in hopes of winning the reward promised. I was always at my desk five minutes before the time ; I took the greatest pains with my work ; my books were all well and neatly kept ; I was the last to leave at night. Yet year after year passed, and neither promotion nor increased wages came.

“Trade is dull, very dull, Mr. Brown,” said Mr. Jones, the junior partner, when I humbly suggested a little increase. When I pressed my plea a little more strongly, I only elicited the very broad hint, “We could get your work done for less, and you are quite welcome to seek a better situation.”

I do not think they would have liked to lose me, however, for I know that they relied a good deal upon me for seeing that all went on right in our office ; but they knew I was a quiet, shy man, and could easily be put off.

CHAPTER II.

“I think I shall have to try to get another situation, Polly,” I said one day ; “Mr. Jones has refused to give me more ; he says he could get a boy to do my work for ten shillings a week.”

Polly and I had known one another for six or seven years ; we hoped to be able to marry some day.

"It is so risky, Fred, you might lose the one situation and not get another ; for if they found out that you were thinking of leaving them they would give you notice at once."

"I am afraid they would, Polly," I replied. "But what can I do ? Twenty-five years of age, and earning a pound a week ! I cannot go on in this way always."

"No, Fred !" said Polly, with a sigh.

"If I had only been put to a trade, I could emigrate, and might do very well ; but what would be the use of my emigrating ? The exposure and hardship would soon kill me. Sitting on a high, three-legged stool, and bending over a desk for the ten best years of one's life does not make a man fit for emigration."

"Ah well, Fred, we must be patient ; we have food and clothing, and so many have not even that !" sighed Polly.

And so I stayed and plodded on as before.

CHAPTER III.

It was midsummer, and we were taking stock. I was kept at the warehouse night after night till nine, and even ten o'clock. We had nearly finished. On the last night I stayed after all the rest had gone ; I had some accounts to enter, and then all would be done, and I wanted to get it off my mind. I was very tired, and it was very hot, and I suppose I must have laid my head down upon my book, after finishing, to rest it a moment, but however it was, I fell asleep.

When I awoke, the moon was shining full upon me. It was evidently very late, and I felt very strangely on finding myself alone there at such an hour. I was still rubbing my eyes when a sound of whispering fell upon my ears. I listened ; yes, sure enough there was someone in the safe room adjoining the office ; I could hear, too, a strange grating sound. What should I do ? There had been a good deal of burglary done lately in the town, and I guessed at once what was going on. I quietly slipped off my shoes, and crept towards the safe-room ; I reached the door. There, full before me, were three men working at the safe : one of them saw me. A moment, and I saw his hand raised, saw a flash, and felt a sharp pricking in my left arm. I did not lose my presence of mind, however ; I remembered suddenly that the key was in the door ; I caught the handle, pulled it to, and turned the lock—it was all the work of an instant—they were caught in a trap. I now rushed out of the warehouse, and shouted as lustily as

I could, Police ! Police ! heedless alike of my bleeding arm and of my shoeless feet. Three or four policemen came running up presently.

“What is the matter ?” they asked.

“Burglars, in the safe-room,” I gasped.

“How many ?”

“Three. I have locked them in.”

“Locked them in ! That’s good !” they exclaimed.

“You must be cautious,” I said, “they have pistols, they have shot me.”

“Where ?” they asked.

“In my left arm.”

“They will not shoot us,” said one, “they know better than that.”

Several others had now come up, and the door was opened, and the men secured. I went with them to the police-station, where my arm was examined. The bullet had gone right through, and there was little harm done. My arm was bound up, and I was taken home in a cab.

CHAPTER IV.

The capture of the three burglars made a great talk in the town next day ; and when I appeared, with my arm in a sling, I was complimented and congratulated on all sides. What a little it takes to make a hero ! What I had done was magnified tremendously.

“Such coolness !” said one.

“And such a quiet, unassuming man,” chimed in another.

“I never heard of a cleverer thing,” added a third.

“And fancy a man like that only being paid a pound a week !”

“A pound a week ?” inquired a chorus of voices.

“Yes, a pound a week !” It was a fellow clerk who spoke, a very good-hearted fellow, Tom Chipping. He only got fifteen shillings himself.

“It is a disgrace to the firm of Wagg, Chard, Jones & Co.” exclaimed one.

“It is monstrous,” exclaimed another.

“It is a disgrace to the town,” said another.

“Something must be done for him,” added a third, “for what he has done is a public benefit.”

And so the thing was talked about ; and a testimonial was got up, and presented to me by the mayor himself.

In the meanwhile, Messrs. Wagg, Chard, and Jones had

called me into their private office, had complimented and praised me, and had informed me that my salary would henceforth be £150 per annum.

CHAPTER V.

"We are in luck, Polly," I said, as I counted out the £500 before her; "we can be married now."

"Yes," she exclaimed, "is it not good? And so sudden, too! Just think, but for those burglars thinking of robbing Messrs. Wagg, Chard, and Jones' safe, you might have stayed all your life working for your pound a week, and we might never have been able to get married at all."

"It was fortunate for me that I fell asleep, or I should have missed the burglars after all," I said.

My arm soon healed, and in a month Polly and I were married. We were just on the point of starting for our honeymoon, which we were going to spend in Wales, when a letter was placed in my hands. It was, I saw from the envelope, from the first firm in the town. I glanced over it.

"More luck, Polly," I exclaimed.

"Oh, what is it?" she asked eagerly.

"An offer of the post of cashier at Wood and Harrington's, with a salary of £600 a year."

"Oh, is it true, Fred?" You are joking.

"Not at all, Polly, read it yourself."

And Polly read it aloud:

"Dear Sir,

Having need of the services of a trustworthy man as cashier, we beg to offer you the situation. The salary will be £600 per annum.

Awaiting your reply, we are,

Dear Sir,

Yours faithfully,

H. WOOD.

T. HARRINGTON.

"Oh, how rich we shall be, Fred."

"Yes, Polly, and all through those good-natured burglars!"

Poetry.

RETURN OF SPRING.

When snowdrops white, with drooping head,
 And crocuses of varied hue
 Peep forth from out their wintry bed
 All dripping with the chilly dew ;
 When robins hop on naked boughs
 And swell their ruby throats with song ;
 When lab'ours trudge behind their ploughs
 And blithely whistle their teams along :
 Then sighs the heart with eased pain,
 Soon gladsome Spring will come again !

When glints of summer sunshine chase
 Dark shadows o'er the distant hills
 And scented tufts of pansies grace
 Moist grots that 'scape rude Borean chills ;
 When skylarks fill the azure cope
 With intermittent bursts of praise,
 And lambkins on the sheltered slope
 Their tiny, bleating voices raise :
 Then sings the heart in joyous vein,
 Now gladsome Spring doth come again !

When hedgerows burst with pouting buds
 And weeding flowers the wayside throng ;
 When soft winds, fresh from out the woods,
 Wake mem'ries that have slumbered long ;
 When Day doth tarry as 't would fain
 Hold commune with his sister Night,
 And woo the stars that in her train
 Make all the eastern gateway bright :
 Then sings the heart the glad refrain,
 Now gladsome Spring is come again !

SPRING SONG.

The sky is blue, the vale is green,
 And bright the bonny blue-bell's sheen,
 And fair the cowslips under ;
 The meadows bright
 In beauty dight
 Call forth our joyous wonder.
 Then come, all ye who love the May,
 And join the world so blithe and gay—
 The glorious gifts of heaven,
 That holt and dene,
 And seep ravine,
 Such varied hues hath given.

HÖLTY.

Correspondence.

A PHRENOLOGICAL SOCIETY.

To the Editor of THE PHRENOLOGICAL MAGAZINE.

Dear Sir,—I am glad that there are some of your readers who think that a Phrenological Society should be formed in London; yet as nothing practical has come out of your remarks in the December MAGAZINE, I make bold to offer a suggestion. It is, that all those of your readers who agree that the project is a laudable one, should send their names and addresses to some well-known phrenologist—to yourself for example—who shall have power to convene a meeting in some central room in London—in your large room, for instance—where the whole question could be discussed. If you think it advisable, I will undertake to act as secretary, *pro tem*.

At the first meeting, which I hope would be a large and representative one, the following, amongst other points, could be settled :—

- (a) Name and objects of the Society.
- (b) Constitution.

Under the first head (a) could be discussed the present position of the various public phrenologists and lecturers as representatives of phrenologists generally; the desirability of more aggressive action by supplying qualified lecturers to Mechanics' Institutes, &c.; the necessity of instructing the public as to what phrenology really teaches by means of the public press, &c.; the adoption of some paper or magazine as the organ of the society.

Under (b) would be settled the rules of the society, its committee of management, and officers.

Feeling as I do the paramount importance of phrenology as the true science of mind, I am jealous of its reputation, and desirous to spread its intellectual and moral benefits. It would strengthen the School Boards or colleges desirous of teaching the subject. When the Crewkerne School Board introduced the subject for discussion at their meetings with a view to its usefulness in schools, they were held up to ridicule by the press. Surely an association could have taken steps to give them valuable help. But I am digressing.

I beg to ask you, Mr. Editor, to give this subject your best attention.—I am, dear sir, yours faithfully,

JAMES WEBB.

February 24, 1882.

[We have received a large number of letters on the subject of the proposed Phrenological Society since it was first broached in the December number; most of them, however, were from the provinces, where phrenology is best understood and appreciated. As we said then, we shall be glad to aid any independent movement in this direction.—ED. P. M.]

Facts and Gossip.

AN amusing account of a pet baboon, in a letter from a friend at Zanzibar, is communicated to *Nature* by Miss Julia Wedgwood. An interesting statement (in relation to the contention that laughter is one of the distinguishing attributes of man) is, that "Judy," the baboon in question, used, when she romped with her mistress, "to open her mouth, show all her white teeth, and regularly laugh like a child, especially when she was tickled." She never laughed at a joke, and nothing made her so savage as being laughed at. [Darwin gives similar instances in his work on the "Expression of the Emotions."—ED.]

Answers to Correspondents.

J. F. (Doncaster.)—Some of your suggestions may be acted on. We should be willing to give occasional reports of phrenological societies if there were such things in existence in England. The MAGAZINE, however, is not a newspaper, and we could not, therefore, undertake to put in the movements and doings of lecturers, &c. We might fill it every month with such matter, and yet not give satisfaction to all phrenologists. Very many, and very conflicting suggestions, are sent us from time to time; from which you will see that we could not conduct our MAGAZINE if we did not steer a middle course between all.

D. A. (Glasgow).—We should be pleased to give more notes and delineations of the phrenology of criminals, if we had the means of examining and measuring their heads, or if we could procure good photographs, showing the different parts of the head. But this we cannot do. The authorities give no facilities for scientific investigation in this way, and so anything that could be said of criminals would be, for the most part, rather haphazard. The casts that are sold, purporting to be the heads of criminals, are too often mere make-ups.

G. S.—The formation of a Phrenological Society will depend entirely on the energy and enthusiasm of students and lovers of the science. If such were established, it would have to be self-governed and self-supporting. Some suggestions we have had in reference thereto are thoroughly impracticable.

SURELY a "Student of Physiognomy" does not think we can answer seven pages of questions, criticisms, and suggestions under this head. Besides, it is our rule to answer no one who cannot give his name as a guarantee of his *bona fides*.

THE
Phrenological Magazine.

MAY, 1882.

MRS. LYDIA FOLGER FOWLER.*

We loved her well ! She was the light
And joy of all our days ; her voice
Could make our downcast hearts rejoice,
Her soothing put our cares to flight.

Well may those who knew the subject of this biographical notice take the above quotation on their lips, for seldom is it the good fortune of mortal to meet with a more estimable or admirable type of womanhood than she presented. Mrs. Lydia Folger Fowler, who died at her residence, 62, St. Augustine's Road, London, on the 26th Jan., 1879, in her fifty-sixth year, was the wife of Lorenzo N. Fowler, the eminent phrenologist, of 107, Fleet Street, and had won a distinction in her own department of labour as great as that which her husband had gained in his. She early devoted herself to the study of medicine, and was one of the first of her sex in America to graduate as a Doctor of Medicine. Seeing, as perhaps few do, the importance of a knowledge of the laws of life for the attainment and maintenance of health and happiness, she devoted herself to the dissemination of knowledge on this subject with a zeal which was probably a little beyond the strength of her constitution, and so, it may be, brought her useful career to an earlier close than would otherwise have been the case. Mrs. Fowler was born in the Island of Nantucket, Massachusetts, United States. The daughter of Gideon and Eunice Folger, she was directly related on the paternal side to the mother of Benjamin Franklin, and possessed in no small degree many of the mental characteristics which that distinguished man inherited through his mother. She was an ardent student ; but not satisfied with an education which would have made her pre-eminent

* See note under heading "Facts and Gossip."

among her sex, she decided on taking up the study of medicine, and for this purpose joined the Medical College of Rochester, New York, where she succeeded in taking her degree. She was the first female professor of obstetrics in a medical school in America; but giving up teaching for a more active sphere, she for several years carried on an extensive medical practice in New York city. In addition to this she assisted her husband in his profession as a lecturer and author. She devoted herself to original authorship, one of the first-fruits of her pen being a treatise on astronomy, for the use of children—in this curiously showing the mathematical bent peculiar to the Folgers, from whom Benjamin Franklin inherited it. Her uncle, Walter Folger, was, in his time, one of the greatest astronomers of America, and succeeded in making, unaided, a telescope equal, if not superior, to that of Herschel; also a wonderful astronomical clock, calculated to exhibit all the chief solar, lunar, and planetary changes for ninety-nine years. But Mrs. Fowler's sympathies drew her to humanity, and the older she grew the more she devoted herself to concrete rather than abstract studies. The starry heavens might fill the contemplative soul with wonder and awe, and draw it somewhat from the littleness of life, but for the lowly and suffering something nearer home was needed to raise, educate, and fit for a higher life.

Men, women, and even children were suffering from broken physical laws—from intemperance and ignorance; here was a sphere for a philanthropist, and into it Mrs. Fowler threw herself, heart and soul. On the platform, with the pen, and by precept and example in the humbler sphere of domestic life, no opportunity was lost of striving to impress those about her with the beauty and happiness of obeying the divine laws of life. Mrs. Fowler travelled extensively in the United States and Canada disseminating knowledge on this subject, and advocating the temperance cause, of which she was always a most ardent supporter. On one occasion she travelled right through the State of Indiana with a lady friend, lecturing every night on the subject of temperance. It was about this time that she published her first work bearing on temperance. It took the form of a tale, entitled "Nora, the Lost and Redeemed," and was first published, as a serial, in a Milwaukee paper; but was subsequently published in England in book form, and has gone through several editions. In 1860 Mrs. Fowler came with her husband to England, and soon after their arrival she took a trip to Italy with J. P. Newman, D.D. (late preacher to President Grant and Cabinet), and Mrs. Newman. On her return she spent a winter in Paris, attend-

ing medical lectures. Subsequently she spent some time in the lying-in hospital in the Marylebone Road, where for three months she had charge of all the obstetric cases. Then she joined Mr. Fowler, and with him travelled and lectured in all the principal towns of England, Ireland, and Scotland. The laws of life and health, physical culture, and moral duty and obligation, these were the themes of continual addresses to her own sex in particular, but often to promiscuous audiences ; and the amount of good she thus did, and the amount of



esteem she won, can hardly be estimated. A number of her lectures she published in a volume under the title of the "Pet of the Household." They constitute an invaluable guide to parents for the physical training and mental culture of their children, to whom, as the hope of the world, she ever paid paramount attention. Another work published during this period is her "Woman, and her Destiny," a work addressed especially to women, and which has had a very extensive sale. Mrs. Fowler also frequently lectured on temperance. These

efforts were invariably to mixed audiences, and on occasions of the kind she has filled some of the largest halls in England. In her style she was telling by her earnestness, and her womanly pathos and descriptive vividness were powerful alike to move to tears or laughter.

After a number of years thus spent, Professor Fowler decided to settle in London, and took premises in Fleet Street, where he has since carried on his profession, assisted, as usual, up to within a few weeks of her death, by Mrs. Fowler. It is right to be mentioned, however, that the tedium of continual lecturing was broken by several trips to the Continent, and by a journey to the East, when Greece, Turkey, Egypt, and Palestine were visited. In London, Mrs. Fowler threw herself, if possible, still more ardently into the labours to which she was devoted. Besides aiding Mr. Fowler in his professional duties, she always had her hands full of independent literary work. The British Women's Temperance Society owes much of its activity and influence to her unwearied exertions as its hon. secretary. Twelve months ago she read a paper for the society at the Mansion House before a large and influential gathering.

Her last public effort was the giving of a lecture, jointly with her husband, on temperance, in the Congregational Church, Leicester Square, in November 1878. Indeed, it may be said that she literally wore herself out by her devotion to the temperance cause, the last work she was engaged in being a temperance tale. Hardly was it finished ere she was laid on the bed of sickness, from which the next removal was to the grave. Her illness, which extended over nine weeks, was borne with exemplary patience and resignation. She enjoyed the fullest confidence in the Christian religion, which, indeed, had, in the strictest sense, been the guiding principle of her life. Death had no terrors for her; and her only regret, in prospect of approaching dissolution, was that she should have to leave behind her those she held so dear.

Mrs. Fowler was blessed with a somewhat rare organisation, and the full and harmonious character which was the result of its early training and development affords a striking illustration of the principles to the inculcation of which she gave her life. Her physiological organisation was most favourable for mental development and exercise, she having a predominance of the mental and vital temperaments. She could go through great physical fatigue when the occasion required it, and put forth more than average physical effort to carry out any special project. The speciality of her mind, as well as of the Folger family for generations back, was an unconquerable

desire to study, investigate, inquire, and originate. In the Island of Nantucket, where the Folgers were known, they were designated "the knowing Folgers." She was particularly well adapted to mental exercise, and would frequently write for hours in succession day after day without apparent fatigue. As a wife and mother she was all that could be desired in every respect. None could be more devoted, exclusive, pure, or constant in attachment than she was. She was highly sociable, companionable, and friendly among those with whom she could sympathise. She possessed an amount of energy, spirit, and resolution which few could excel. In visiting Rome she was not satisfied till she had gone to the top of St. Peter's ; when at Naples she must look into the crater of Vesuvius ; and at Cairo she must ascend to the summit of the Great Pyramid ; and in many similar ways she manifested her resolution and ambition combined. She was remarkable for her prudence, circumspection, and balance of power. Her theory and practice were one and the same.

Mrs. Fowler was excessively sensitive about character, reputation, and position, but manifested it more as applied to her character and her moral position in society, than with reference to the fashions or the ordinary mode of gratifying ambition. She was much interested in physical science, in experiments, and in demonstrative philosophy, and as a student of anatomy was inferior to none in close observation and correct dissection. But her *forte* was more in her powers to plan, think, originate, and lay out work in her own particular way. In fact, she seemed to excel in originating, composing, and amplifying her thoughts, blending with her planning talent more than ordinary system, method, arrangement, and perfect order in doing things. Of music, poetry, and art, she was passionately fond, and would almost go into raptures when in the enjoyment of any of these. She was decidedly of a mirthful type, being lively, cheerful, and entertaining. Exceedingly correct in her first impressions of individuals and in her discernment of the real motives and standpoint of persons with whom she came in contact. She was not to be deceived in her impressions of people when first introduced.

Mrs. Fowler possessed great power of imitation, and could easily adapt herself to a variety of circumstances. In travelling in the East she was as much at home in the varied circumstances in which she was placed as any of the company. She early came under the direction of her higher faculties, as though it was almost a premature growth ; for from a child she never manifested those boisterous expressions of the passions that most children do. Conscientiousness

was always active. She would not allow herself to resort to expediency, or to do things that might by some be considered right and by others wrong, but strictly adhered to what she thought was right. She was buoyant in spirit, hopeful in tone of mind, and so spiritual in her conceptions that she delighted as much to dwell upon immaterial as upon material things. Her power to magnify and embellish her thoughts and feelings was owing greatly to the influence of this faculty. She never trifled with religion, or with any other subject of a sacred or exalted nature. She was, however, very Catholic in her feelings, and had more charity for those who differed from her in religious opinions than many. But she never wavered in her faith in the doctrines of Christianity. Still the strongest element of her mind was sympathy, tenderness of feeling, regard for the happiness of others, and a desire to render her life as useful as possible. This was strikingly shown in her life's work, which may be said to have been a constant effort to ameliorate and beautify the conditions of human life. It was shown in her poetry, of which, among other works, she published a volume after her coming to England, under the title of "Heart Melodies." In it sympathy with the lowly and striving is a prevailing characteristic. Indeed, it stimulated her to attempt too much, and although she had attained her fifty-sixth year, yet she may be said truly to have died prematurely, presenting to those who saw her a few weeks prior to her decease the appearance of one who bade fair to live and labour yet many years. She in reality sacrificed herself on the altar of well-doing, thus adding one more to that noble army over whose human remains the tide of progress continually advances. And in finishing the record of her days, we must add that hers was in every sense of the word a "well-spent life." So widely extended was her influence that her loss will be mourned, not only by her own family, but by a very large circle of friends and acquaintances both in this country and America.

FALLACIES ABOUT LUCK.

As to fallacies about luck, the supposition that after a great number of heads in fifty tossings, the next fifty would probably show a smaller number, involves precisely the same error (diluted by being spread over a larger space, but not diminished in amount) that I dealt with in my former paper. How can the number of heads in one set of fifty tossings affect the number which shall appear in the next. Science says on *à priori* grounds, "not at all"; Experiment repeats

as emphatically (it could not say so more emphatically) "not at all." But then, says the querist, how is it that, as science assures us, there is always in the long run an approach to equality in the number of heads and tails tossed in a great number of trials? If the balance always tends to the horizontal position, surely a movement of one scale upwards should assure us that presently the other scale will begin to rise. Equality is indeed brought about in the long run, but not in the way imagined. Absolutely not the slightest influence is produced on the results of one set of, say, a hundred tossings, by the observed results of the next preceding set: (how *could* there be?) Nor is there any tendency in a very long series of tossings, starting from some particular point, to reduce a discrepancy between heads and tails, which had attained any amount up to that point. On the contrary, if we count from and after that point, as well as if we count from and after the absolute beginning, we shall find the same tendency to equality in the results of a great number of tossings. The excess of heads over tails, or of tails over heads, may go on increasing, and yet there is the tendency to equality, which science indicates. This sounds paradoxical, but it is what science teaches, and what experience confirms. It is demonstrable that the greater the number of trials of coin-tossing, the nearer will the *ratio* of heads to tails approach to equality, though the actual excess of one over the other may probably be greater, and possibly much greater, than in a smaller number of trials.

Take a very simple case. Suppose a coin tossed four times, and consider the chance that there will be either two more heads than tails, or two more tails than heads. There are in all 2^4 , or 16 possible events. That there may be two more heads than tails, three heads must be tossed, which can happen manifestly in four different ways, for the first, second, third, or fourth toss may give the single tail. So, also, there may be two more heads than tails in four different ways. There are therefore 8 ways (out of 16) in which either heads or tails may show three times as against one of the other kind. The chance is therefore $\frac{1}{2}$, or it is an even chance, that there will be this degree of discrepancy. On the other hand, there are only 6 ways in which there can be 2 heads and 2 tails, for only 6 pairs can be made out of 4 (the first tossing may be head, as also second, third, or fourth; the second may be head, as also third or fourth; the third may be head, as also the fourth; and these arrangements of 2 heads give also all the arrangements of 2 tails.) Thus the chance of absolute equality is only 6-16ths, or 3-8ths; that is, the odds are 5 to 8 against

absolute equality, while the chance that there will be a difference of 2 exactly between the heads and the tails is $\frac{1}{2}$. (The chance that all 4 will be of the same kind is, of course, 1-8th.)

Now compare with this the results we get when, instead of 4, there are 8 tossings. Here there are 2^8 , or 256 possible events, and it can readily be shown (but I leave this and the general problem to a series of papers which I shall hereafter write on probabilities) that the chances of the different results, and the odds respecting them, are as follows :—

	Chance.	Odds.
All heads or all tails	1-128th ...	127 to 1 against.
All but 1, heads, or tails	1- 16th ...	15 to 1 against.
All but 2, heads, or tails	7- 32nds ...	25 to 7 against.
All but 3, heads, or tails	7- 16ths ...	9 to 7 against.
Four heads and four tails	35-128ths ...	93 to 35 against.

The most probable of all events in this case, as in the last, is that there will be 2 more heads than tails, or *vice versa*; and whereas in the former case it was an even chance that there would be just this discrepancy, the odds in the present case are 9 to 7 against it. But the chance that there will be this discrepancy *at least* is greater with the greater number of trials. For in the former case the odds were but 5 to 3, or 175 to 105, against absolute equality, in the present case they are 93 to 35, or 279 to 105 against it. And it can be shown that it becomes less and less likely the greater the (even) number of tossings, that there will be absolute equality. Yet, on the other hand, in the cases considered, the chance that heads will exceed tails, or tails heads, not by a given amount, but in a given degree, diminishes as the number of tossings is increased. Thus with 4 tossings, the chance that heads will be to tails as 3 to 1 (or *vice versa*) is, as we have seen, one half; with 8 tossings the chance of this relation holding (6 of one kind, 2 of the other) is only 7-32nds. Again, the chance that heads will be to tails, or *vice versa*, in a ratio of not less than 3 to 1 is 5-8ths in the former case; in the latter (adding together 1-128th, 1-16th, and 7-32nds), we find it to be only 37-128ths; in one case the odds are 5 to 3 in favour of that amount of discrepancy at least, in the other they are 91 to 37 against there being a discrepancy so great.

But some correspondents ask whether, even in matters of pure chance, there may not be something more than mere accident,—whether some men may not have a certain degree of good fortune given to them,—whether, in fine, what is called luck may not in some degree depend on Providence. This takes us a little outside the domain of science; but as it does not bring us upon any of the vexed questions of dog-

matic religion, I will venture to make a remark or two on this (in reality) unscientific aspect of the question. To the student of science it appears as absurd to imagine that the laws of nature would be set on one side in matters of pure chance (for even in coin-tossing nothing short of a miracle can cause the law of averages to be departed from—in the long run—either in favour of any one or against him) as it would be to conceive that an experimenter favoured by Providence might get a mixture of carbonic acid gas* and nitrogen to behave like a mixture of oxygen and hydrogen, or as it would be to suppose that during Darwin's researches into the work of earth-worms, these creatures, *suadente diabolo*, acted in a way not natural to their kind. If in the case of so-called lucky gamblers, a supernatural power, good, bad, or indifferent, has been at work, science has no power of dealing with the phenomena. All science can say is, that the observed and recorded phenomena agree precisely with those which can be shown to be necessary consequences of the laws of probabilities: all she can do is to go on dealing with the matter precisely as a Pasteur would go on dealing with the observed phenomena of disease germs, uninfluenced by any suggestions that diseases were produced by supernatural agencies.

So far, I have simply considered what science necessarily does in such cases. The student of science can do no otherwise. But I may note, in passing, that just as there seems to be something irreverent in the suggestion of Providence arranging for the "breaking of the bank" by a Garcia or any other unprincipled gambler, so the general suggestion that Providence, and not the laws which have been assigned to the universe (how or why we know not), is to be credited or discredited with all the chances or coincidences which seem surprising to us, appears to me singularly dangerous to the faith of the weaker minded. Because, while many of these coincidences have been satisfactory enough in their results, at least as many have been very much the reverse, and not a few utterly deplorable.

Take, for instance, the following case :—

In the winter and early spring of 1881, in America, railway accidents were very common (231 happened in the first two months of that year), and any one who had (as I had) much railway travelling to do at that time had a very fair chance of

* I am perfectly aware that what was called carbonic acid gas twenty years ago now goes by another name ; and I am equally aware that a technical meaning is given to the word "mixture," other than its ordinary significance. But I am not addressing chemists just now.

coming in for wounds and contusions, if not worse. Now it so chances that at the end of February, a train was wrecked in Missouri, in which two persons were killed and many injured. Another train was sent, carrying several medical men, and a number of appliances for the relief of the wounded. By a most unfortunate chance, this train, thus forwarded to help many suffering persons, was itself wrecked ; seven persons were killed, including several of the doctors. If we are not to consider this strange and sad coincidence as belonging to the chapter of accidents, as due to the chances which always affect events depending on natural causes (as the weakening of embankments by frost and thaw, the action of winds, rain, snow-drifts, &c.), must we regard it as due to special intervention of Providence ? Science tells us, and experience confirms her teaching, that in the game man plays (or his contest, if you will) with nature, the laws of nature are as laws of the Medes and Persians, that he must not expect to have his moves back, or any help outside the laws assigned (inexplicably so far as we are concerned) to nature ; if he does expect this, he will most assuredly be disappointed.

—*Knowledge.*

THE MORAL FACULTIES.

Man exists as a moral being in the same manner as he does intellectually and socially. The moral faculties are a part of the mind ; and the mind, as a whole, depends upon the brain and nervous system for its manifestation. They may be weak, or strong, upon the same principle that the other faculties of the mind are. Some persons suppose their religion is in their heart, because they feel a tender sensation in that region. But it is not any more reasonable to suppose that this is the case than that fear or any other similar emotion resides there which produces a peculiar sensation in the heart when we are excited. There is, however, a greater sympathy existing between the brain and the heart, than between the brain and any other organ, as the heart has more nerves than any other organ.

The term heart is applicable to man's moral nature, figuratively, in the same sense that we use the term literally, in a physical sense, to represent the essence of man's physical powers. It is no more inconsistent with the spirituality of religion and of the moral powers that they should have their location in the head than in the heart of man. The moral powers depend upon the organisation of the brain. Different

men vary in their moral organisation the same as they do in their social and intellectual; and its strength, development, and manifestation depend upon the same natural laws. Some are limited in moral as well as in social and intellectual power, and for the same reason.

All men remarkable for native moral power will be found high in the coronal region—the top of the head. Melancthon, Payson, and Oberlin, were all of this cast of brain. Men remarkable for the absence of the moral feelings—not exhibiting them in their daily “walk and conversation”—who are barbarous, wicked, savage, cruel, both in public and private life, as Nero, Caligula, Vitellius, and others of similar character, will as invariably be found to be low in the coronal region, and marked for the absence of this development of the brain. The same is true of nations. Those distinguished for the pursuit of war as the business of their existence—for savage and merciless barbarity in the prosecution of their contests—are notorious for low heads, and great width at the base of the brain. We need not go abroad for examples. They are in our midst everywhere. The men around us remarkable for the manifestation of moral power in their lives have comparatively high and narrow heads; while those known as supremely selfish, lacking in sympathy for the ills of others, mean, revengeful, cruel, have comparatively low and wide heads.

Some persons are known in society as exhibiting at one time high moral feeling; at another, predominant passion; at another, the animal appears to control the whole man. There *are* such characters; and they but obey the laws of an irregular organisation. Such an organisation gives ascendancy to one part of the brain at one time, and to a different part at another. Where the developments of the brain are uneven, irregular, disproportioned, the passions, selfish propensities, or the moral sentiments, will respectively predominate in action, just as each is roused by its appropriate stimulus. The difference between such a mind and that of a person whose brain is properly developed is that particular faculties, when stimulated, are held in proper check by the restraining influence caused by their combination with other active and well developed powers. A person with an uneven, irregularly developed brain never did, and never will, maintain a steady, uniform, reliable course of conduct.

Phrenology does not pretend to say whether a man has experimental piety or not. It professes to point out the natural tendencies of mind to different developments of religious emotion; and if religious, what kind of religious feeling would

prevail. It points out what religion a man would have had if he had not fallen; what he would have been had he never departed from a correct course of action. The moral faculties give a sense of obligation, of immortality, of spirituality, of the Supreme Being, and also of our relations with other beings, and lead us to desire their happiness. This is natural religion, or its fundamental principles. We find in the mind faculties which lead to act in harmony with all these fundamental principles.

Conscientiousness gives a sense of justice—of right and wrong. A man deficient in this faculty is not necessarily dishonest, but is liable to be so. He is more likely to yield to the appeals of the passions, to be dishonest, because the sense of the justice of actions—of right and wrong—does not restrain him. Conscientiousness is generally large in woman; seventy-five out of every one hundred women have it large, and consequently in that proportion are honest. This does not include fashionable women; those whose whole existence is so thoroughly artificial as to make them hypocritical all their lives. I mean women who are women in the true dignity and strength of female character; who make the practical duties, the amenities, the charities of life, the beneficent aim of their existence, instead of the cold and vapid conventionalities which form the code of fashionable life.

Why is it that in England Conscientiousness does not keep pace in its development and manifestations with the other faculties? It is because it is not exercised; because the perpetual and exciting strife for wealth and for political distinction is too great a tax upon the faculty. Moreover, it is not educated in families or in schools. The punishment of a child, with the rod or otherwise, for an offence against Conscientiousness is not an exercise of the faculty. This cannot educate it. It can be invigorated only by exercise; and so long as the only training the faculty has is a scolding or a whipping for its violation, so long shall we have a people, under the present circumstances of temptation in our country, who are comparatively deficient in the development of this organ. Expediency—not abstract right—is the motto. People too often measure their notions of honesty by the laws of the land, and not by right principles. If the payment of a debt can be avoided by law it is done. And men fail, and by the failure bring others from comfort to absolute want. The man becomes afterwards rich,—lives in splendour, and “fares sumptuously every day”; while by his side, in poverty and distress, live on those who were stripped of their possessions by his agency. He is just as honest as the law compels him

to be. Society, if he is wealthy, may call him honest ; but such a perversion of truth does not alter the case. In the religion of the day there is not enough honesty. Whether we shall join this or that church is too often made a matter of pure speculation as to its probable effect upon the individual's business, and often considerations of popularity govern. There is no honesty in this.

Hope is the next moral sentiment I shall notice. We all expect to go home to-night, to live to-morrow, to live next year, to be old—to live for ever. We have always had a consciousness that we are to have a future existence. This is Hope ; and Campbell beautifully says :—

“What potent spirit guides the raptured eye
To pierce the shades of dim Futurity?
Can Wisdom lend, with all her heavenly power,
The pledge of Joy's anticipated hour?
Ah, no ! she darkly sees the fate of man —
Her dim horizon bounded to a span ;
Or, if she hold an image to the view,
'Tis Nature pictured too severely true.
With thee, sweet Hope ! resides the heavenly light,
That pours remotest rapture on the sight :
Thine is the charm of life's bewildered way,
That calls each slumbering passion into play.
Waked by thy touch I see the sister-band,
On tiptoe watching, start at thy command,
And fly where'er thy mandate bids them steer,
To Pleasure's path, or Glory's bright career.”

Extirpate this faculty from the human mind, and you would destroy the strongest incentives to human effort. We should sit down and do nothing beyond the demands of the present moment. It is this faculty which gives the young man, just starting in life, the ardour, energy, and perseverance, which so distinguish him. It has a two-fold influence. It leads to all sorts of extravagant business undertakings,—makes men over sanguine in consequence of inducing a disregard of the real facts of the case.

The faculty in its spiritual exercise gives a sense of the unseen and confidence in the untried. The Christian should manifest this faculty in a marked degree. It leads him to place his hope, his reliance, his chief good, in the anticipation of a future spiritual life with God in a more perfect state of existence and happiness. It leads him to rest his security in the future, in the unseen—not in the present and seen. What, then, shall we say of professing Christians belonging to the Church, who lend all their energies to amassing wealth ? What shall we say of the professed Christian who, under the

supreme guidance of Acquisitiveness and perverted Hope, rushes on headlong in the pursuit of wealth and fails in business? The Christian has no right to fail in business,—no right to go into business in a way to be liable to fail. But when Christians do business as though God was their banker; as though the failure of the discount of His good pleasure was of more consequence than the refusal by a bank to discount a note; as though their treasures were in His keeping “in whom there is no variableness or shadow of turning;” when Christians go into business and prosecute it with this spirit, you will not see them failing, and spreading injury and embarrassment on all sides, and often inflicting positive misery.

Hope is a most powerful stimulant to the human mind, and sustains it in the hour of difficulty and affliction when all other resources fail.

“Auspicious Hope! in thy sweet garden grow
Wreaths for each toil, a charm for every woe.”

It shortens time and brings eternity near. It regards our life here only as a pastime,—a field of preparation for our real existence, which Hope distinctly recognises as in the unseen future. It does not suffer us to live as though all our pleasure was in this life,—as though the physical pleasures we now enjoy, the mental gratification we can reap, and the limited, obscured, palsied spirituality of our best estate on earth, were the most exalted state of being of which we are susceptible. If I thought all our happiness was in this world, I should feel that the pleasures of existence here were more than counterbalanced by the troubles and trials of life. The happiness of this world is inferior in its nature to that which we are introduced by Hope and the other moral faculties. One hardly outlives the moment of present indulgence, while the pleasure resulting from the moral faculties never fades. When the faculty is small, persons are discouraged at every impediment; every obstacle appears insurmountable; they are prone to look upon the “dark side of everything;” their efforts to surmount difficulties and embarrassments are comparatively feeble, and they often become a dead weight upon society; oppressed themselves, they are a burden to all around them.

Cling to Hope as the sheet-anchor of the soul. Let it be the last thing you lose; if all other things fail, retain your hold of this. If properly cherished and cultivated, it will never fail you in time of greatest need. Heavy afflictions often overtake us; we lose parents, children, companions;

but, keen as may be our anguish, we should never be disconsolate or dejected. If this faculty have its proper influence, we have still left that which is of higher value. We have no right to love wife or child more than our spiritual relations. Christians are often seen mourning at the loss of property, or of friends, in a spirit which shows very plainly that their affections are not where they ought to be, and that they prefer a treasure on earth to one above.

Persons with Hope and Self-esteem small, and Cautiousness, Conscientiousness, and Veneration large, give but a feeble manifestation of this faculty. They are gloomy and despondent. And we meet sometimes with gloomy Christians. The very phrase is a solecism : for I can hardly conceive of such a being as a gloomy Christian. The treasure of the Christian is in the future ; it can neither diminish nor fail ; and consequently he has no right to be gloomy ; his "hope is sure and steadfast." I cannot but regard the phrase, "Gloomy Christian," as an absurdity in language.

The healthy or unhealthy influence of other faculties depends much on the action of Hope. If you would be healthy, happy, and useful, attend to the proper exercise of this faculty. Then life, either in the present or in the future, will be inviting.

Spirituality or Marvellousness next comes under consideration. The perceptive intellect introduces us to the physical world, to objects, to things, to matter ; Marvellousness introduces us to things above the cognisance of the senses—to things spiritual. Such are the developments, the circumstances, the training and education of most persons, that they have far more consciousness of the physical than of the spiritual ; and, in fact, in too many instances, I am sorry to say, the spiritual seems to be wholly withdrawn from their vision. Speak to these of spiritual things, and you talk in a dead language. Yet there is a spiritual state, nevertheless, out of which grow certain unalterable relations of our being. In proportion as we acquire supremacy over our animal nature, and hold communion with the spiritual, are we fitting ourselves for our future destiny.

We exist first as physical beings, with a very limited degree of either spiritual or mental sense ; but the order of nature is the growth and development of the mental and spiritual until they have the ascendancy ; thus better fitting us for a spiritual than for a physical existence. Persons of high mental temperament can easily reason upon spiritual subjects ; while a man of strong animal appetite is insensible alike to their existence and influence. From their organisation, certain

persons are more inclined to be spiritual than others. If a person has this faculty largely developed, with a favourable organisation, the spiritual, rather than the physical, is the object of his joy and contemplation. He sees the dealings of providence in all that transpires around him ; recognises providential interposition ; while to others, of opposite development and organisation, events transpire as a "matter of course ;" they happen because, in the "order of nature," they must happen.

The popular impression in reference to this faculty is far from being correct. Its office is to give a sense of the spiritual, as such, and as distinct from the physical. There is an intimate relation existing between man and his Maker ; intimate as the relation between parent and child. This intimacy, or sense of relationship, exists through the medium of this faculty.

We pray. Why? We do not see God ; our senses have no recognition whatever of his presence. It is because of this faculty. The whole doctrine of faith and prayer is based upon it. If small, in religious persons, they are not fervent in prayer and devotion, because their sense of spirituality is weak, and they do not have that degree of spiritual communion that others have. This sense, however, is increased by the cultivation of the faculty by proper exercise. There is a medium through which God influences us—through which we can understand the Divine Mind—and that medium is this faculty. We can converse aright with God, and if we do, we will be guided aright by the exercise of this faculty, apart from Reason. There is something in the nature of man which tells him, "This is the way, walk ye in it." It is this faculty which speaks thus, and is the guide or monitor to man in spiritual life.

When very small, combined with large Self-Esteem, Firmness, Causality, and small Hope, the man is apt to deny a future existence. When large, combined with large Hope, and a favourable organisation, it makes the enthusiastic man. This combination is common amongst Methodists, and gives a positive character to their hopes. They are more certain they are truly converted than other people are ; more certain they will go to heaven ; and they profess to be governed more by a sense of spirituality than others.

The faculty stimulates us to make inquiries as to new propositions—to test them. A lady once remarked to me that "it was time enough to believe a thing when it had been proved"—by which she meant that then was the proper time to pay attention to new discoveries. What if all were like

her? A new idea might be thrown out, but no one would test its truth or falsehood. The whole community—every individual—would have to wait until it should be approved as true ; and who, in that case, would furnish the proof? And if it be a merit in one to decline investigating a subject, other things being equal, it is for all. And peopled thus, the world would go on unenlightened, save by the very feeble glare of self-complacence. Every improvement affects in some sort the physical, mental, and moral interests of society, for these are inseparably linked, and are ever reciprocal in their influence. To secure these ends, those who are impelled by a higher and stronger faith than the lady referred to, must take hold of new propositions and discoveries, and separate the wheat from the chaff.

Veneration is located at about the centre of the coronal region. This faculty gives a sense of the superiority of others—a consciousness of the superiority of the Divinity. It was largely developed in the head of Payson, of Oberlin, and in that of Black Hawk. Man in his lowest estate worships inferior objects, such as the sun, men, and idols, the workmanship of human hands, all of which have been deified by him. Superiority was attributed to all of them ; and in the worship of them, as superior, this faculty was manifested.

Veneration gives us a sense of the superiority of the Supreme Being ; but just in proportion as the mind is expanded and properly directed by the full development of *all* its powers, do we have correct and exalted views of God. If we have an idea that the human mind is not progressive ; that it requires no further development of the mind to appreciate the character of God as presented in revelation and in his works, then such persons have very limited ideas of the attributes of God, and never change their opinions concerning Him.

Veneration leads man to place his dependence upon a superior power. When he contemplates his own being, and sees how he is organized ; that his very existence is a mystery ; that the laws of his nature were established and kept in force by an intelligence beyond his own control or comprehension ; that he cannot understand the principle of his own existence—which is a fact that did not and does not arise from his own will ; that the breath of life itself is not subject to his own control : these are some among the considerations which, to a greater or less extent, leave an impress upon every human mind, and compel all, in the hour of sudden extremity, when death stares them in the face, to appeal to a superior being. This endowment of our nature is in perfect harmony with the relations of our being. We are created ;

and it is fitting we should look to the Creator for guidance and support.

When we fail to worship and reverence our Heavenly Father, we omit one of the most important duties of our lives. If we fail to be influenced and guided by the Divine Spirit, then we have nothing on which we can lean but human reason and experience, and those very imperfect ; or upon our blind instincts, which are most commonly perverted, and whose tendencies are more frequently to lead us astray than aright. We involuntarily respect those who are better than we are. If a man is great and worthy—if he have profound talents, and is remarkable for his justice, kindness, and respect for others—we delight in rendering him the homage of our respect. Men of wealth are often the objects of our veneration ; but never, as such, except when the faculty is perverted. Wealth, or its possessor, as such, is not the object of the veneration of a well regulated and well developed mind. Its possession adds nothing to the true greatness or grandeur of character, any farther than it is made the instrument of the exercise of the moral faculties, in seeking out and alleviating human want—physical, mental, or moral. When a man of wealth does that we cannot help venerating him. His beneficence challenges our admiration ; while his own character assumes a brighter hue from the light reflected back upon it by his own good deeds. Voltaire had this organ remarkably large, and his veneration for high rank and royalty was extraordinary ; so much so, that through his whole life he was a slave to his deference to those enjoying such distinctions. It does not necessarily follow that those who have this faculty largely developed will exercise it upon the highest objects of worship ; for we frequently see them contented to exercise it upon objects of an inferior nature.

Veneration in its nature is the highest faculty of the mind ; and directs it to the highest object in existence. Its highest exhibition is a respect or veneration for the Supreme Being. It is located in the centre of the group of moral faculties, and, physically speaking, it occupies the crowning point of all the organs of the mind, and is the *last* faculty manifested by the dying Christian.

It is reasonable that God should be the supreme object of our affections, because He is the highest moral being in existence ; and because it is through Him “ we live and move and have our being.” And if we act according to our obligations, as recognized by philosophy, we shall have our affections placed upon the highest and most valuable object. Consequently, it is not reasonable that we should love any

other object or objects so devotedly, as to feel that when they are lost, all is lost, or that our most valuable treasure has departed ; as the true object of our supreme regard and worship, is still left for us. It is because there is a God that you and I live. His power sustains and protects us, and upholds the laws by which the universe is governed. We love our wives, children, property ; but we should so love God, that if these are stripped from us, we still feel that our best friend is left. They are near and dear to us, but God is nearer and dearer and higher ; He sustains relations to our higher nature, not sustained by them ; and though at their loss we may feel regret, we at the same time rejoice in the possession of the highest good of our existence. But few have arrived at this state of perfection.

Woman has Veneration in a higher degree than man. This is in harmony with the circumstances of her life ; for she is oftener placed in circumstances where she sensibly feels her dependence upon others. The “praying souls” are the Sisters of the Church—not the brethren. Occasionally we meet with a man imbued with the spirit of prayer ; but he will be found to take after his praying mother. If properly cultivated, more respect would be paid to parents, to superiors, and to the Divinity.

Benevolence is located at the frontal portion of the coronal region. This faculty gives us a sense of sympathy with the joys and sorrows of others, which without it we should not experience. Without it we should look upon our fellow-men as created to minister to our gratification—in a measure as merely prey—and not as our brethren, and the proper objects of our aid and kindness. The faculty gives humanity and interest in the welfare of others, and our disposition to relieve their wants and to contribute to their happiness. It enables us to live up to the second tablet of the new dispensation to man—“Thou shalt love thy neighbour as thyself.”

Those in whom it is deficient seek only to gratify their own desires without reference to the feelings, views, wishes, or desires of others. If very deficient, combined with strong appetites and selfish propensities, it leads to gratification at the expense of the happiness of others. Some live entirely for their own pleasure, without reference to the pleasure or happiness of others. A person in whom this faculty is small, combined with large Acquisitiveness, is disposed to grasp all he can of this world’s goods with which to fill his coffers—forgetting that when he has accumulated more than he needs, or can conveniently use, he has only multiplied his cares and troubles ; made himself a beast of burden to carry wealth for

others to use ; placed it beyond his power to exhibit the virtue of generosity ; liable to suffer more from surfeit than others from emptiness ; that he has cut himself adrift from the warm sympathies of mankind by his lack of dependence ; that he is in danger of having his nobler powers rot from inertia ; the spiritual merged into the sensual : in a word, to be a slave and pack-horse all his days, merely to render conspicuous an example of the complete triumph of a grovelling propensity over all the attributes of the mind which fit it for communion with God through an endless existence. Besides, upon the mere score of present comfort, those who accumulate a superabundance of wealth are usually made quite as unhappy thereby, and generally more so, than those are who have not enough.

Men are selfish, grasping, avaricious, and the wealth of all is hoarded in the hands of a few. The wealth of all is the product of the earnings of all ; and it is only by a perversion of this and other faculties that the few are overburdened with wealth, while others by their side pine and suffer for the want of it. When man does this, he perverts the nature God gave him ; and by perverting this faculty, he destroys the perfect harmony of his being, and deprives himself of a rich and bountiful repast of happiness set before him by his beneficent Creator. For it is an error to suppose that the selfish, grasping man,—who withholds more than is meet, and who “grinds the faces of the poor,”—does *not* inflict injury and misery upon himself. It would not well accord with our ideas of the perfection of God’s works, to suppose that he has established a system of laws for the government of man, by which one individual can prey upon another, and not at the same time prey upon the integrity of his own nature. He who confers happiness, is made happier himself. Why ? Because the act is in harmony with the laws written upon his constitution. He who inflicts misery is made more miserable thereby. Why ? Because he has violated natural laws. It may be supposed by some, that those who by large or small crimes have deadened the sensibilities of the mind so as to be comparatively insensible to the woes they inflict, are exceptions. This is not so. No more appalling retribution can easily be conceived, no curse pronounced more to be dreaded than that which deprives a man of the capacity for lively sympathy with the joys and woes of others. It is to live, and yet be dead.

Let this faculty be cultivated by daily exercise, and no such retribution will overtake us.

Some men hoard up wealth during their whole lives, and

at death distribute it among benevolent institutions, and imagine themselves benevolent; but this is not the doctrine of Nature, or in accordance with the teachings of Christ. His precept was, Give as you have opportunity. If a man has property, he should use it while he lives. For it is to be presumed that the man who by his industry, frugality, and sagacity, has accumulated wealth, will dispense it more wisely than those to whom it may be bequeathed. And for a still stronger reason should every man be the almoner of his own bounty. To give, to make sacrifice of self, increases a man's happiness, and strengthens and improves his moral nature. Therefore, upon every consideration, it is wiser that a man attend personally to the dispensation of his own wealth. There are sufficient objects of charity around us on which we can exercise our sympathies in full.

The habitual and proper exercise of Benevolence has a redeeming influence upon character which is but slightly appreciated. It illumines our track of life, and enables us to tread pleasantly in quiet paths. I once knew a man in whom Benevolence and Hope were small, and Acquisitiveness large, an incident of whose history furnishes a pertinent illustration of the benefits resulting from a culture of the faculty. On a certain occasion, he let slip an opportunity for a rare bargain, by which he could have made a large sum of money. He was so deeply chagrined and mortified, stimulated by foiled Acquisitiveness, that he at once resolved to drown himself. On his way to the river for that purpose, he met a beggar, who asked him for money to purchase something to eat. It instantly occurred to him that as he was to die in a few minutes, the change he had in his pocket would be of no farther service to him, and that he might as well give it to the beggar to relieve his necessities. He did so; and kept on his way to the river. This act, however, arrested his attention, and roused his mind to the consideration of an object beyond himself; and he could not, while on his way, crowd from his mind the impression that the beggar was made happy by his gift; that he had made him happy; that he had a competence, enough for all his wants, and a balance to devote to dispensing favours and happiness; and concluded, before he reached the bank, that there was something to live for in making others happy, and that he would set about it. He retraced his steps, and literally carried out the lesson taught by this incident, and has since spent many happy years in conferring happiness upon others.

This is the true principle. Live for others, and they will live for you. If I aid others when in my power; alleviate

distress whenever within my power ; if I am in trouble, they are all on my side ; they then all live for me. But if I live wholly for myself—never extend to my fellow-men the tear of sympathy or the hand of charity—and am overtaken with distress, I shall find that for me none have lived. If all lived upon the principles of benevolence, there would be enough for all. But the corporations of the day are so organised that those who labour the most get but a small pittance of their earnings.

It is not benevolent for a man to make a liberal subscription for a new church and not pay his debts. It is not benevolent for a man to hold on to his money till he dies, and then bequeath large sums to his children, and very likely be instrumental in ruining them by inducing some form of profligacy thereby. It is not benevolent to pity a man and do nothing for him.

But it is benevolent, if you have a sick friend, to go and see him, and cheer him up, if you can do nothing more. Such is the power of sympathy in our nature that it is often more valuable than the physician, and saves those who without it would perish. Indeed, I know of those who are sick for the reason that they have none to sympathise with them. It is benevolent then to expend our sympathies upon our fellow-beings—to take an interest in their welfare. When a man feels that he is cut off from the sympathies of the human race he is reckless and desperate. Nothing is more to be deplored than to be so cut off ; but when a man is sustained by the better feelings of community, he has powerful inducements to live a life of usefulness. Let us, then, exercise our Benevolence, impelled by an active and healthy Conscientiousness and Veneration, and guided by an enlightened intellect, that we may be happier. But do not, as some do, exercise it in a low channel.

When the community shall have fully appreciated all the primitive faculties, and shall have cultivated them, we shall have a different state of society from that which we now have. We shall then see, what we now do not, individuals with a harmonious development of all the powers of the mind. This can never occur where there is not accurate knowledge of the primitive faculties, and of the office of each. Upon no other basis will there ever be a systematic and complete education. Until then shall we fail to witness a harmonious blending of the different interests of men.

When Benevolence is properly educated, there will not be so many people miserable as there are now. People then will not indulge in pastimes involving profuse expenditure of

money to provide luxuries which injure all who partake of them ; while the poor of their own parish are deprived of the very necessities of life. And still less will professing Christians thus act. Nor will there be so many rich to be spiritually hardened by pride and indulgence ; nor so many poor to be made reckless or abandoned by the corrodings of want.

L. N. F.

PHYSICAL TRAINING FOR GIRLS.

The word *training* is very expressive. It means literally "draw to," but when applied to human organisation we should understand it as physical training by exercise ; that is, development of the body by exercising all its parts. This process is quite different from what is generally understood by the term education. This applies to the mind, more particularly to the intellectual faculties. In the schools very little attention comparatively is ever given to the education of the moral sentiments or the domestic affections. In the case of girls this constitutes a great failure.

But if the mind is educated at the expense of the body, it constitutes a still greater failure. Within a few years public attention has been called in a special manner to the education of girls and the higher culture of women. This is all well, but the training of the body—a good development of the physical system—is also important. But how can this be secured ? It is needless to say that much here depends upon the type or kind of organisation which is inherited. One of the greatest blessings that a person can possess is a healthy, well-organised body at birth. But the advantages of this fail unless it is properly taken care of. This training or care should commence early. While the dispositions or instincts of the boy and girl may differ in some respects, the greatest liberty, as far as exercise, games, sports, etc., are concerned, whether in-doors or out, should be given alike to both.

After ten or twelve years of age the body takes on a more rapid growth and passes through very significant changes. In the case of the girl this is the most critical period in her life as far as health is concerned. In the growth and changes of the physical system the greatest pains should be taken to see that there is a natural, healthy development of every part. Unless this is properly attended to the seeds of weakness or disease are engrafted into the system which affects the highest interests of woman through life.

Physical training just at this period is one of vital importance. The exercise that is best adapted to develop all parts of the body in a natural, healthy manner is *domestic labour*. It is always at hand; it can be taken regularly every day, and there is such variety that almost every muscle can be exercised. Housework should never be considered menial or degrading; it is nature's laboratory in which the girl may obtain not only the best physical development but most valuable knowledge that will fit her for the practical duties of life. This training may be supplemented by other kinds of exercise, such as walking and out-door sports. The very general introduction of foreign help into domestic service has proved most unfortunate for the health of American women.

Closely connected with this neglect of physical training at home is an evil of great magnitude—that is, supreme devotion to brain-work. The practice pursued very generally at the present day of confining the girl in school or seminary for a series of years consecutively is attended with most serious evils. In the language of a popular writer, “it is educating our girls to death.” While we would not discard education in all its various departments, extending to the highest culture, we maintain that it is no advantage or blessing if it is to be obtained at the expense of the physical system. There are other parts of the body besides the brain that need faithful training. The highest accomplishments and mental acquisitions will not compensate for impaired constitution and poor health.

NATHAN ALLEN.

LECTURES ON PHRENOLOGY.

BY DR. SPURZHEIM.

LECTURE XIII.

I have finished the individual organs and the respective powers manifested by them. You may ask whether we have not too many, or whether we have enough. Those who think that we have too many, must reflect that the same mode of reasoning which convinces us that there are two or three fundamental powers proves also that there are thirty-five, or probably more. We endeavour to explain the parts we observe, and if we could explain them by a single power, there would be no necessity for multiplying them. I say to those who hint that there are too many powers, “Tell me any one that can be expelled, or any one power whose actions you can

explain by referring it to another." I have not found that the parts could be explained by diminishing the number ; Nature is not so simple in her operations as some speculative philosophers suppose.

Those who think that there are not enough powers, confound the action with the power. This is a very important point to distinguish, because a small number of powers may produce an infinite number of actions by their combination. It is really astonishing to find every individual so modified in this way, although possessing the same powers, that among thousands and thousands of men, you will never meet with another exactly like yourself. We shall find that thirty-five powers, if tried by numerical progression, would form an infinite number of combinations ; just as a certain number of letters, possessing few primitive sounds, will allow of the formation of an immense number of words. There are but few primitive colours, but their combinations are immense. We never see two faces quite alike ; the parts composing the face are but few ; but how innumerable are the varieties of appearance produced ! I see no reason for believing, therefore, that there are too many, or that there are not enough.

The parts of nature must be explained, and if it be necessary to adopt a power to explain them, we must not hesitate to do so. In looking at the individual organisation, and the several organs of the powers we have spoken of, we shall find really a philosophical arrangement. The powers have not been discovered in the order I have spoken of them, but one has been discovered here, and another there, and in different parts successively, and if you just look at their situation, it is curious to find that those powers, common to man and animals, are the powers necessary to animal existence, are all placed at the base of the brain, and you will find, that the more rare the powers in nature, the higher up are they placed, and you find them largest in man, as he is at the top of the animal creation. We find also that all the similar powers have their organs near to each other ; you may see an instance of this in the arrangement of the propensities or feelings, the sentiments proper to man, and so on. Then, again, you see a difference in the size of the organs, some being small, others large, and if you reflect on the sphere of activity, you find that also differing ; the activity of all persons is not equal. All things are reasonably to be understood by taking them into parts ; make a moral analysis of any subject, and you will soon arrive at the elements of which it is composed, but talk of it in the bulk, and you will discover nothing. Suppose we say, first, that the individual fundamental powers exist, and that they are attached to

individual cerebral parts to be ascertained only by observation ; reasoning is worth nothing here ; you may reason for ever on the subject, but you could not ascertain the situation of the respective powers by reasoning. Supposing this to be the case, we can then take a step farther, and endeavour to show the usefulness of phrenology.

In the first lecture, I had the opportunity of saying, that it was impossible to speak of the usefulness of phrenology before the thing itself should be thoroughly understood. Suppose an organ exists, will it not be necessary to represent the configuration as nature presents it ? An artist may draw a portrait of a person, or he may sketch out an historical picture ; he may draw up dramatic scenes of common life, and produce good effect ; but they say he ought to imitate nature. I have before shown, in drawing portraits, how necessary it is to attend to the configuration of the head. I have shown you that the head is as much modified in figure as the face, and that, therefore, it is necessary for an artist to attend to the figure of the head as well as the face, if he would represent nature. (The painting of the head and face separable from each other, by which another head might be appended to the same face, was shown, to point out the great importance of an attention to the shape of the head in portrait painting.) Do you suppose that if an artist were to represent a person he intended to be sent to heaven, and another to be sent to hell, that he would give them the same shaped heads ? The ancient artists were very attentive to the various shapes of the heads of persons of different talents, and they were right in doing so ; why should we neglect it ? Hence, in studying characters, it is necessary that artists should study the configurations of their characters, so that where cunning prevails, or natural affection, where firmness or humility prevails, we have seen that they are connected with individual organs ; and these organs must be studied, if they wish to represent nature.

I come now to another point, to a new step in our investigations, to give a new application to the arts in common life, and to consider how far the powers of the mind are indicated by certain appearances of the countenance, by what is called physiognomy, a term derived from two Greek words *φύσις* nature and *γνωμον*, a sign or indication, so that physiognomy means the indication of nature by certain signs, although in its application the term is restricted to the expressions of the countenance. Is there any such thing as physiognomy ? I propose this question, and I know some will say there is, and others will contradict that assertion. We will assume that there is such a thing, and I am sure that every one is a physiognomist

to a certain extent ; when persons are brought together, one judges of another at first sight, but whether right or wrong I will not say. Animals, too, are physiognomists, and so are children. Animals can judge of some of the feelings of man ; a dog will know whether his master is angry with him or pleased. His master may be angry with him, and express himself in an artificial language, but he may do this with a smile upon his countenance ; the dog looks at him, but takes no notice of what he said, and, if he could speak, would say, no, no, my master is not angry ; but give him only one look expressive of anger, and the animal is afraid. Children always look at the faces of their parents to see whether what they say is true or not. This is physiognomy, but I prefer to call it natural language. The last time I spoke to you of artificial language, and pointed out the differences between them. Language is the expression by signs of what is going on internally ; these signs are natural or artificial : if the signs employed be natural, then I call that natural language, and if the signs be artificial, then I call it artificial language. The natural language is employed by all animals endowed with consciousness and other powers. As soon as there is a power active, it is indicated by external signs, and this is a language. In discussing about physiognomy, we have first to settle what we shall call physiognomy ; according to its etymology, it means a knowledge of nature ; but this meaning is quite overlooked in the present times, and it is commonly understood as the knowledge of internal feelings by external signs. However, these signs must be distinguished into two classes ; firstly, such signs as indicate natural dispositions, but not their activity ; and, secondly, such signs as indicate the activity of the natural powers.

Physiognomists, from ancient times to the present day, have confounded these two ideas ; they have attempted sometimes to distinguish them, but in their application you will find that no sufficient distinction has been procured. In Lavater's work, entitled "Fragments of Physiognomy," (and really they are but fragments,) two sorts of signs are spoken of : physiognomical and pathognomical. By the physiognomical signs are understood such as are shown in the solid parts, and the pathognomical are the signs observed in the soft parts, in the motions of the parts. This is an ancient distinction, but it has not been sufficiently observed in the application. When you look into the work of Lavater, where he applies the signs, you will find that he confounds those which depend upon motion with those which depend upon configuration, and you will find that there is no rule, no principle established to guide

our observations. I am sure that Lavater himself had a fine tact in discovering, even in an astonishing manner, characters and talents ; but he has given no principles by which others may do the same. However, this art of reading in the faces the characters and the talents, is very important to actors and to artists. If you were to appeal, as I sometimes do, to artists, and ask them how they know how to represent exactly such and such characters ; they say that the power must be felt ; that there is a peculiar talent given to artists. This is true. There are artists who have a wonderful talent of representing on paper the internal feelings, by certain external signs, and others cannot succeed in doing so. There is something of the same kind in practical life ; there is the finest tact in some, of judging of others by the external expression of the face. Some can do so with a certain description of men, but not with all characters. Among the actors, again, you will see that there are some who will perform certain characters very well, but not others. Now, is it possible to establish rules of natural language ? I said before, that every thing done by nature and dictated by the Creator is submitted to rules, and that there are, therefore, principles in natural language. Hence, whoever has the talent I have just described, is in possession of the principles of natural language.

Take any individual who has the power of Colour large ; it is not necessary to say to him, place such and such colours together ; he will know what to place together. Take another who has the reasoning powers strong, he will feel what is wrong and what is proper. The principles are necessary for the guidance of moderate powers. Nature has furnished principles, by intuition, to men of talents ; but since the powers are not all equally active, it is necessary that principles should be supplied to persons possessing weaker talents ; but recollect that the principles are discovered, not created. Natural language exists ; the principles of it exist. The power of imitation is great in some, but not in others, and those artists who have the power strong, will give great expression to what they represent. But what shall we do for those who have not the power very large ? We must give principles to them ; but how shall we find them out ? It is really astonishing to observe how ancient this doctrine is ; we find, if we read Solomon, that "one teaches with his fingers, and another makes signs with his hands ;" many ancient authors, as Cicero, and other great men, had written on physiognomy, and artists, who represent nature, ought to study it. The fundamental powers were not understood, and that seems to me the great reason why the subject of natural language has not advanced ;

for as soon as we know them, our judgment of natural language begins, since every power has its peculiar sign in animals and in man. You can never confound the signs of one power with those of another ; hence I repeat, that each is fundamental, and that it is necessary for those who study physiognomy, and the signs by which the activity of the powers is indicated, to understand the fundamental powers of phrenology ; and more especially is this necessary for those who study expression in the arts. Follies have crept in here, in the study of physiognomy, and, therefore, let me repeat, that I do not speak of the configuration of the face or other parts of the body as indicative of the powers, except the configuration of the brain. You would not, for example, judge by the shape of a man's hands whether the person had a great power of Comparison or Causality ; you would not say, by the shape of a man's fingers, whether he is benevolent or otherwise, nor would you say by the shape of the nose, whether a man were a musician or mathematician. If you study the works of physiognomists, you will find that they admit certain signs to indicate the manifestations of the mind. They imagine that the nose is in some relation to the mind ; they examine the nose of a witty person, and if they can find any thing peculiar in the nose of a witty person, then such a nose is regarded as demonstrable of wit. Some imagine that there is something in the lip, or in the nose and lip, as indicative of wit, and so there are several external signs for the same internal power ; but nature does not employ many modes of indicating the same talent. Nature is constant, and does not vary her course to flatter our conceptions ; she is infinite in her modifications, but never varies in her principles. Hence we deny to physiognomy the power of indicating the talents, excepting only the brain, where the talents reside. If there be a proportion between the manifestation of any power and the appearance of the brain, we can distinguish it, but not so in any other part of the body. If we look for a talent, we must go to the part where the power resides.

I come now to a second point of physiognomy, which I shall examine a little more closely, namely, the motions of the soft parts, or the pathognomy of Lavater. The internal powers of the mind are manifested externally by the five senses and voluntary motion ; hence we wish to find the signs of the internal activity in the five senses and voluntary motion. All that takes place externally must be considered in speaking of the internal powers ; and this I have before spoken of under the name of natural language—not the configuration merely, but the actions and expressions. Suppose I were to confine

myself to configuration, and take that part which physiognomists have chosen—the face ; I might look at a bust, or at a man asleep, but there is no activity in them. I wish to arrive at the signs which indicate the activity of the internal powers. Is there a sign for Self-esteem ? How can I know if Self-esteem be active ? Or any other powers, say Cautiousness, or Acquisitiveness, how can I know whether these powers are active ? By the external signs ; by the natural language. Hence I say that a phrenologist studies the expression of a power, and the signs by which the activity of that power is indicated. A power being destined to act, will employ the instruments necessary to act with, and will employ them in a way in which the function of that power may be best exercised ; and I can conceive of nothing more simple, as the principle of natural language, or of the knowledge of the activity of the internal powers, than this. A power will employ the instruments wherewith to act, and the five senses in nature are familiar examples of what I mean. We find an apparatus, a mechanism fitted to each ; every one will agree with me in that. Now, certain other internal powers manifest themselves as plainly, by certain external actions, as the senses I have just mentioned. Permit me to go through certain powers, and to make certain applications of the powers by phrenology, to the arts and to practical life, in order to convince you of the accuracy of this principle.

There is a power called Combaticiveness. This power gives a disposition to fight, according to its activity—to defend or to attack. A man attacks, I suppose, from the impulse given by this power, the power being very active ; there are those who, like the gladiator of ancient times, attacked others in the amphitheatre to amuse the people ; and those who read the Roman antiquities will find various positions in which they fought described. The statue of a gladiator at Paris, of which this is a small model, is said to be in a position admirably calculated to fight ; various opinions have been given on this point, but in what position is this man, I ask, to fight ? (The trunk and right arm are stretched forward, and the weight of the body consequently resting on the right leg, which is also advanced.) The description which is given of the position of this statue, at the Louvre, is, that it is admirably calculated for fighting, but I do not believe this. Every one who fights must take a position in which fighting is possible. Place yourself in the position which this statue is placed in, and you could not resist the blow of a boy, in such a position. The artist did not intend to represent him fighting, it was something else that he intended. Look at this statue

of Apollo ! Artists entertain different opinions of it ; some say he is in the act of discharging an arrow from his bow, others say he has just discharged it, and is watching its effect. But what would you say of this position ? Could he bend the bow and send off the arrow in this position ? (Apollo is represented stretching his body a little forward, and throwing the whole weight of it upon the right leg, which is advanced.) I have seen the Royal Archers of Edinburgh, and I never saw any of them discharge an arrow in such a position ; the right leg must go back to be capable of applying force with the right arm, or the equilibrium would be lost by a slight jerk. I cannot blame the ancient artists, because I do not believe it was intended by them to have represented Apollo doing such things ; they have represented their characters correctly, and they have chosen even difficult positions to represent, generally preferring beings in motion to those at rest. I believe that it is intended to represent a preparation for the discharge of the arrow, not the act of discharging. Observe the productions of the artists of this country, and you will find that they do not study enough the laws of natural language—their positions are not natural ; the first object should be to ask, How does the thing take place ? and then put the statue in such a position in which the power intended to be displayed can act. Go through the other powers and examine them in the same way ; take Secretiveness, Cautiousness, and Adhesiveness. Now as to Adhesiveness, that will very much influence the manner of salutation ; in this country you shake hands, but let me see a person shake hands with another, and I know by it if his attachment be nominal or sincere. If you give another merely a finger or two, and just drop the hand down and remove it again in the same way, oh ! then I know the power is not active. But see how good old friends shake hands ; they do it with an earnestness, and you may see that sincerity and attachment flow through their fingers, so to say.

I must be short, and therefore I will next say something of Secretiveness. How can I know when this power is active ? By the natural language, by the appearance of the whole countenance ; such a person looks sideways, looks about the room, but never looks you in the face ; if he speaks, it is in a whisper, and if he comes in at the door, he comes in softly, scarcely allowing himself to be heard ; look at the sly animals, how they approach each other. If he do not feel great confidence, he will scarcely look at the person he is addressing, and I make it a point always to study the natural language of persons more than the artificial language. He will wish to conceal himself, will avoid company, and if brought into it,

will soon try to get away. Look at the organisation of Secretiveness, and you will find the natural disposition and the development of the organ in correct proportion. Look at another who has Firmness active ; you will find it prevalent in all his actions. Having found the powers, the first thing in natural language (and every power speaks its own language), you will not confound Self-esteem with the Love of Approbation, nor Secretiveness with Firmness, nor Acquisitiveness with Benevolence. We know, however, that these powers are not always disposed to act, but that at certain times they are more active than others.

You will find that even in the parts not necessary to act, the action goes on, and this is a second step in the study of natural language. I will explain: not only all the parts necessary to act are brought into action, but the similar parts of the body are brought into action, to contribute to the expression of a certain power. If I find a disposition to contract my arms forcibly, is it not necessary to contract the muscles of my face at the same time? There are some persons who have a language of the eyes, and that language is understood by some and not by others ; is there no accordance between the expression of other parts and that of the eyes? It is necessary to come to common life to observe the activity of the powers. A proposition very important in connection with natural language is this, that there is a harmony, and there must be a harmony in all the natural expressions. The statue of Achilles, at Paris, is certainly a beautiful piece of sculpture, and it is represented in a sorrowful mood ; all the right side is so, and all the left, except the arm, which has been restored, and it has no accordance with the other parts of the statue, for it is firmly contracted, whilst all the other muscles are represented relaxed ; I would certainly knock it off, for it is only a disgrace to the other parts. The voice also bears a relation to the prevailing powers ; if a man be very secretive and sly, his voice will be soft and sweet, but if very combative, firm, or courageous, his voice will be of a stronger tone.

Another point to be considered in natural language is this ; all the motions of the body are modified by the state of activity of the powers. All the organs placed hereabout (the top of the head) draw the head upwards, and there are others which draw it down. Examine nature, and you will see how the external countenance changes, and how the positions of the head vary ; if you see a person who has a good deal of Self-esteem he will keep up—up straight, and perhaps stand and talk with you thus (quite upright and the arms folded over the chest). There are some children to whom you never

require to say, "keep up," and there are others to whom the governesses, or parents, are continually saying, "keep up; sit up." In walking, riding, and speaking, if you see a man keep himself quite erect, with the "os sublime," you may be sure that the feeling of Self-esteem is very active. But how do you say to another, "your humble servant, sir?" Do you throw your head back, and place your arms "a kimbo?" If a man were to say, "your humble servant," in this way, you would tell him to go about his business, I am sure. The disposition is natural in all countries, and has been so at all times, to bend forwards whenever it is intended to show respect to an equal, or to a superior being. Raphael has beautifully shown, in one of his paintings, the attachment of children to their parents by their suppliant forms as they approach; they lean forwards. See a man who has Acquisitiveness active, a cunning man, he looks one way and then another way. Secretiveness makes a man look down; Cautiousness makes a man look all about. Look to the stern countenance and sturdy expression of a man who has Firmness active; nothing will move him, he holds himself quite upright, and the organ is situated at the top of the head. Then, if you come to individuals who hope much, who pray with hope, they do not look for their Heavenly Father hereabout, (looking on the floor,) but they look up. God is everywhere, but whenever we wish to apply to a spiritual agent, then up we go, although reason does not indicate that it is always to be found in one direction, either upwards or downwards. Whatever the situation of the organ may be which is active, there the head is carried in that direction, whether laterally, upwards, or downwards. If you try to recollect any thing, you lean your head forward upon your arm, and you put your finger almost upon the part; and it is a known fact, that after having reflected long upon any subject the front part of the head becomes painful. When the organ of Harmony is active, observe how a person performs upon an instrument; if a young lady plays upon a piano who has no taste for music, she puts her fingers upon the keys like sticks, but if she feels what she plays, then observe her motions. So of Wit and the other powers.

Following up the subject of the natural language, you will find that it will be more actively expressed in some countries than in others: some will speak with the whole body, others with particular parts; do not, however, confound what is essential with what is merely a modification. The essential powers are always the same, but the slyness of an Italian will be differently indicated from the slyness of an Englishman; the first will show it by his whole actions, and the second only

in his eyes. In the expression of characters, you may study gracefulness, and this is commonly done, but the artists have forgotten too much to imitate nature. Moreover, those who wish to make a study of the natural language are invited to study first the primitive powers ; then the language by which their activity is indicated ; next the modifications ; and, lastly, the combinations of the powers as well as the expression of the individual powers.

THE QUAKER ARTIST.

“I tell thee now, Richard, that thee’ll never get a cent of my money if thee keeps on with this devil’s work.”

The speaker was Friend Joseph Harris, and he held at arm’s length a small picture in water colours, the features of which were hardly discernible in the gloom of the winter morning. Friend Joseph had been at the barn, as was his custom, to fodder the cattle and feed the horses before breakfast, and had discovered this humble bit of art in a nook in the granary. He did not have to be told that it was his son Richard’s work, whose inclination to such ungodly pursuits had been the distress of his parents’ lives.

Full of suppressed wrath, Joseph burst into the kitchen where the family were waiting breakfast, and without preface addressed his son with the threat which he considered the most dreadful he could use—that of disinheritance. It meant something, too, for in spite of his plain surroundings, Joseph Harris owned nearly two hundred acres of land worth easily a hundred and fifty dollars an acre, and his visits to the county town on the first of April of each year were not to pay interest, but to receive it. A tall, straight figure, he was nearing sixty years of age, but as vigorous as a youth, with quick motions and sharp black eyes, indicating a violent nature chained for life by the strict discipline of the Society of Friends.

His son Richard, now turned of twenty-two, was of a different mould, short and stoutly built. His face at first sight seemed heavy and vacant, but this was, in fact, the abstraction of the dreamer. His soft brown eyes, and hair clustering in thick curls over his low but broad forehead, made amends for his somewhat commonplace features.

The moment his father entered the kitchen, Richard felt that his secret labour had been discovered, but his anxiety was more for it than for himself. He rarely dared face his father’s anger, for Joseph Harris, like many of his sex, made

up in severity at home for the smooth and passionless exterior he maintained abroad.

“Will thee give it to me, father?” said Richard, advancing toward the outstretched hand which held the sketch, while the hand’s owner contemplated it with unspeakable disgust.

Poor little painting! It was a fragment of an autumn afternoon, during which Richard had been husking corn in “the hill field,” and which had abided in his memory clothed with the halo of a hundred day-dreams. There was a corner of a wood, the foliage half green, half shading into tints of brown and red. A rivulet leaving a piece of meadow still gay with autumn flowers, and green with late grass, flowed rippling and sparkling out of the sunlight into the shade of the dying leaves. What courage and hope it must have! Richard followed in thought its waters as they flowed on to Chester Creek, and then to the stately Delaware River, and far out till they met the mighty ocean which washes the shores of all the world.

And as he mechanically plunged his husking knife into the shucks and turned out the golden ears one after the other, he humbly took this lesson to himself, as was his wont, and said: “I, too, must have more courage, firmer hope. Why should not I go forward in my study of art with greater faith? I must, I will.” And to fasten the vow, he had painted two studies of this little piece of meadow as a constant reminder, snatching the time on First days and Fifth days, when his father and mother were at meeting, and he and Mose Riddle, the coloured man, were left to look after the stock. One copy he had sent on a venture to a commission house in New York, the other he had hidden in the barn.

It had acquired a kind of sanctity to him, and each tree had become a symbol of some rebuff or danger he was fated to encounter in his future life. He had, moreover, described it to Sibbilla Vernon, and had promised this sole confidante of his aspirations that he would bring it over sometime, and let her see it. But Sibbilla lived two miles away, and as her parents were also strict members of meeting, who regarded every work of art as profanity, this would have to be managed with due caution.

Richard’s first impulse, therefore, was to secure the picture. But his father had a double cause of displeasure and his anger was deep. He had agreed to give Richard a fourth share in the profits of the farm this year, and not only was this painting business an ungodly amusement but also a waste of precious time and a loss of money. It must be stopped.

“I’ll put it where it deserves to go, and where thee will fol-

low unless thee turns thy steps from the world and its follies. But the fire that thou wilt meet will be that which is not quenched, and where the worm dieth not."

With these words, which Friend Harris spoke slowly and with that slight chanting intonation which characterizes the utterances of the speakers in meeting, the solemnity of which was farther increased by the use of the formal "thou" instead of the usual "thee," he stepped to the kitchen fireplace, where a goodly wood fire was burning under the crane, and striking the picture against the corner of the mantelpiece tore a rugged split through its centre and threw the whole into the flames. In a moment it was a shriveled cinder.

There are certain natures whose inherent strength can only be developed by a violent shock. Full of latent power, their weakness comes from a native humility. They distrust themselves through a general admiration of others. Such was Richard Harris. But the necessary shock had come. He gazed a moment at the cinder, his face crimsoned, but the severe discipline of the Society and the family exercised the sway that it usually does even on the very young among Friends.

"Father," he said, in a low and even tone, "I repeat what I have often told thee; I have no light that there is evil in painting; but as thee thinks there is, I shall bid thee and mother farewell to-day, and seek employment elsewhere. I shall not ask thee for any share in thy estate."

Taking his hat from the window sill he passed out of the kitchen door leaving his father speechless with amazement at this rebellious utterance, and his mother—a poor weak woman, constantly in misery between carrying out the severe rule of her husband whom she feared, and yielding to her tenderness for her boy whom she loved—wiping her tears without emitting any sound, either word or sob. As for his two sisters, they sat demure and motionless through the whole scene, at heart rather pleased at it, as they had no sympathy with their brother's taste for forbidden arts, and thought him a queer, wasteful, uncomfortable member of the household. Moreover, though younger than he, they were not too young to see at once the pecuniary advantage to them of his renunciation of his share of the estate.

Richard went towards the barn and took a seat in a nook of the corn-fodder stack that was built along the side of the barnyard. He did not feel the cold raw air of the early morning. His mind was too full of the step he was about to take and what had led up to it. Now or never he must quit the farm, renounce the teachings of the Society, throw aside the

coat with standing collar and the quaint broad-brimmed black hat, give up the plain language, reject the counsels of the venerable facers of meeting who would surely be appointed to visit him, and prove a recreant to the revered precepts of Fox and Barclay. All this was meant by a strong bias for art.

Why was he born with it? -Whence came it? These questions he had often asked himself. For six generations his ancestors had never touched a brush or palette; not a painting nor a statue, nor a musical instrument, nor any drama or work of fiction had been allowed in their houses. How had he been created with a passion for colour and form, with a love of poesy and music, which neither the dreary farmwork nor the colourless life, nor all the frigid, deadening discipline of the Society could quench?

Going back to his earliest memory, he could recall that when four years old he was left for a few hours at the house of Mike Wallis, an Irish tenant on a neighbouring farm, and that Mike's wife had kept him in the utmost bliss by showing him a coloured print of the Virgin and the Infant, and telling him the pathetic history as it had pictured itself in her warm Irish heart. But what was the horror of his parents next day when he toddled into the room when they were at dinner and called :

"Mudder, mudder, come see God."

His parents ran to the door to see what this strange appeal meant, and lo! there, on the floor of the front porch, chalked in rude but faithful outlines, were the Child, with rays of glory around His head, and the Mother, by His side, holding a cross. He could still recall the scowl that came over his father's face, and his mother's impetuous rush for a bucket of water and scrubbing-brush. Nor had he forgotten the violent shake and immediate spanking he himself received for his artistic endeavour.

His memory leapt till he was a boy of ten, and to his intense delight at effecting a trade of a Barlow knife for a box of paints. Many an hour of joy had they given him, hiding himself in the garret of the old house, in the back part of the hay-mow near the dusty gable window, or in a little hut he had built in the woods. But his prying little sister betrayed him one day, and not only was his treasure confiscated, but he himself was tied to the bed-post by his mother and given such a whipping as would have discouraged most youthful artists.

Later in life, when he was too old for such vigorous measures, many lectures had he received on the frivolity of such tastes and wickedness of ministering to them.

These scenes passing through his memory convinced him that it was vain to battle with such inflexible rules, and that to be free he must leave the farm and all its associations.

There was but one which had really held him. This was Sibbilla Vernon. The daughter of rigid parents, her mother even a "public friend," whose voice at monthly and quarterly meetings was familiar to all members of the Society, Sibbilla was a not unusual type of the advanced thought of her sect. Calm, self-possessed, clear-headed, she had announced when but fifteen to her family that her own conscience was her guide, and that in all essential matters she should follow it.

From childhood she and Richard Harris had delighted to play and talk together; and though no word of love, no kiss, and no caress had ever passed between them, both their families and themselves considered their union merely a matter of time and money. Nor did this absence of the usual passages of love seem to anyone concerned a strange circumstance. They were accustomed to the repression of all outward show of feeling. In neither household had the children ever seen a kiss exchanged among its members, young or old.

Though devoid of any passion for art herself, Sibbilla understood and respected the forbidden tastes of her lover. She looked upon his peculiar abilities as gifts of God for use in life, and she quietly but firmly put aside the traditions of her sect, which condemn them indiscriminately.

"Wilt thou presume to deny the many testimonies of Friends, both in England and America, against these sinful arts?" her mother would ask; being a "public friend," of considerable local fame, she never employed the incorrect nominative "thee" even in family life.

"Mother," replied the daughter, "they spoke for their day. I must act in mine by the light I have, not by theirs."

Her mother wisely avoided argument, trusting that the Spirit would enlighten her daughter in time.

Leaving the fodder-stack, Richard walked across the bare fields towards the plain brick house which was Sibbilla's home. His mind was made up. He would go to New York and devote himself to the study of art. He had saved since his majority about three hundred dollars. He had youth, strength, talent, love—was not that enough? Would Sibbilla approve of it? Would she make the serious sacrifice it involved?

As he approached the house it was about ten o'clock, and all the males were out at work. He knocked at the front door, instead of the side door as usual, and Sibbilla herself opened it and gazed at him with considerable surprise in her

hazel eyes, quickly changing to an expression of pleasure, which Richard did not fail to note, and which filled him with both joy and anxiety.

"Why, Richard, what brings thee here at this hour?" was her exclamation.

"Sibbilla," he said, "I wish to see thee," and stepping in he closed the door, and they both stood in the wide hall, obscurely lighted by the transoms at each end. He paused a moment to recover his control, and then spoke in a low, vibrating tone: "I am going to leave the farm in order to study art. I shall have to give up my membership in the Society, as thee knows. Father says he will leave me nothing if I do, and I know thy mother agrees with him. But I am not afraid. All I ask is that thee approve of my decision and will become my wife as soon as I am able to offer thee a home."

At that supreme moment of resolve all the strength which for generations had been nurtured by the noble Quaker theories of self-reliance, all the passion which for generations had been muffled and smothered under the narrow Quaker system of formality and repression, burst forth and were expressed in the face of Sibbilla Vernon. She seemed to rise in stature, and looking him full in the eyes, laying one hand on his arm, and passing the other round his neck, she said:

"Richard, I will come to thee then, or I will go with thee now."

The tone was low, and the words without haste, but he who heard it felt in his inmost soul that no oath could be stronger.

"Thank God and thee," he uttered, and for the first time in their lives each felt the magic meaning of a kiss of love.

Seated on the wooden "settee," which is the common furniture of the country hall, he told her his father's words and action, and his own unalterable determination to seek his future in art. It was agreed that they should be married by a magistrate as soon as Richard should have an income of seven hundred dollars a year.

Full of quiet joy he went home, announced his intended marriage and immediate departure, packed his trunk, and told Mose to have the dearborn ready at six o'clock in the evening to take him to the station. After the five o'clock supper the members of the family maintained almost entire silence, his mother quietly crying, his father reading the "Book of Discipline," his favourite literature.

The dearborn drove up with Mose, who had been to the station with the milk, and stopping at the country store, which was also the post-office, had brought a letter for Richard. It was rather unusual for any member of the household to receive

a letter, therefore Mose announced it with considerable emphasis, addressing his master by his first name, as is the custom in strict families :

“Joseph, hy’ur’s a letter for Richard. Hiram sez it’s a letter from York, and ’pears as if it mout be on bizness.”

Joseph took the letter, and resisting a strong inclination to open it, passed it to his son. It was from the firm in New York to whom he had sent the copy of his picture, and it read :

“NEW YORK, Jan. 18, ———.

“DEAR SIR,—We have the gratification of informing you that the study you sent us on sale has attracted the attention of one of our patrons, to whom we have parted with it for 500 dols. Deducting comm., stor’ge, insur’ce, deliv’y, &c., as per enclosed statement, leaves a net bal. of 372 dols., 62 cents, for which find our c’k herewith.

“You mention a duplicate of the study yet in your possession. We will take that at the same figure, cash on delivery, and will give you an order for five more studies, to be completed within a year. “Respectfully,

“SMILES, WILES & CO.”

As he read this letter the cheque fell from his hand on the table. The sight of the coloured and stamped paper was too much for his father. Glancing at the large amount, as much as he received for the best wheat crop his farm could raise, he snatched the letter from his son’s hand, and eagerly read it. Richard stood by in silence.

“What does he mean by the duplicate study?” said his father, in an uncertain voice.

“He means,” said Richard, quietly, “the picture you threw in the fire this morning.”

A new light dawned on his father’s mind. So long as his son’s taste seemed nothing but a time-and-money-wasting form of idleness it had no redeeming features ; but the incredible fact that there were people willing to pay hundreds of dollars apiece for such vain images now stood right before him. He was too shrewd to misunderstand it and its results.

“Richard,” he said, with a softened voice, “I desire that thee would postpone leaving us for a few days. Thy mother and I will accompany thee to the city, and will be present at the ceremony. I think Sibbilla’s parents will also not refuse to attend.”

As he went out he said to Mose, who was waiting with the dearborn :

“Mose, thee should always be slow to anger, and avoid the committal of rash actions when out of temper.”

D. G. BRINTON.

Poetry.

HOLY-DAYS.

Come, my children ! come, my children ! let us hark to wood and dell !

Lo, the sun is up before us ; bird and beast obey his spell ;
On the eaves the grey house-sparrow chirps incessant ; whiles, O hark !

In the rosy light of morning sings his matin hymn the lark.

To-day is holy, O my darlings ! sacred 'tis to peace and rest ;
Not a jot of labour do I till the day hath died i' the west,
And Night's drowsy wing hath silenced every sound of field or street,
And at Morning's roseate gateway us again the sun doth greet.

Come, my children ! come, my children ! let us haste to join the throng

That on hillside and in meadow fill the air with joy and song.

O 'twere shame to waste such hours—holidays are all too short !

See how in the brightening sunbeams myriad mayflies dance and sport.

Ah, my children, this is gladness !—gladness that I fain would see
'Joyed by all who in the city see nor bird, nor flower, nor tree ;
For, amid its gloom and glamour, children grow from youth to age,
Knowing nought beyond the sadness writ upon its dreary page.

There, my children,—ah, 'tis sadness !—morning brings no joyous sound,

But the toiler's weary patter on the foot-worn, stony ground :

There the eve with deep-felt silence and the dim night-star enwrought
Start no mystic tide of feeling burthened with impassioned thought.

No, my darlings—God forgive us if we joy when others weep !—

There men meet with white, wan faces, hiding sorrows dark and deep ;
And they laugh with mocking laughter, thrilling through our hearts
with woe,

While their souls are sighing, longing for somewhat they hardly know.

God be with them ! Heaven forfend them !—would that all could share this day,

In its glory and its gladness from the city far away.

Play, my children, joy while youth is, and there's time for thoughtless mirth ;

For the day comes when man sorrows 'mid his joyance on the earth.

Facts and Gossip.

WE this month give the portrait and biography of the late Mrs. Fowler, in order to meet the wishes of many who have expressed a desire to see them in the PHRENOLOGICAL MAGAZINE. The biographical sketch is copied from the pages of the *Daisy*, a literary journal published at the office of the *Christian Age*.

AN American man of science, Mr. W. B. Cooper, has been speculating on the probability that our skulls are not so thick as those of our ancestors. It is very likely that he is right. His argument amounts to this, that in ancient times, when men lived on terms of perpetual hostility, and heads were liable to be broken in frequent skirmishes, those heads were most easily broken which had the thinnest skulls, and the men with thick skulls survived them and continued the race. Nature's selection, therefore, operated to thicken the skull, and at the present day, among those races which club one another, the skull is thicker than with us, as a blow which scarce would move a negro would scatter the brains of an Englishman. In barbarous times the men only endured the brunt of the warfare; but amongst us the only wives who can survive domestic correction are those with thicker brainpans than usual, whilst the recrudescence of street violence renders the weeding out of thin-skulled men only too probable. It may be worth while to remember, in this connexion, that thinness of skull not only subjects people to the probability of having their heads broken, but also encourages headaches and neuralgia, and allied tortures. So the time may come when the advantages of having a good thick head will be manifest, and we shall reconstruct our language of compliment and derision on that basis.

MESMERISM, or psychical magnetism, is one of those subjects which always has a strong attraction for many minds. To these it will be interesting to have a summary of the latest researches on this subject by men of science. At the head of these investigators is Professor Heidenhain, of Breslau. He does not like the words "mesmerism" or "hypnotism," and suggests, as more correct, the phrase "experimental catalepsy." Nor does he think that any "magnetiser" is needed, as purely physical agents can induce this condition, as warmth or electricity. Many common states of mind he explains as really those brought about by this strange influence. Thus the mental dulness experienced on listening to the ticking of a clock or other monotonous sound, and the sleepiness produced by sitting near a warm stove are approximations to mesmeric sleep.

The most curious result he has reached is that in certain persons lightly stroking the right side of the forehead and the right temple will produce complete colour-blindness in the *left* eye, so that the brightest tints appear of a dull gray, while the perception of light remains as strong as ever. This extraordinary observation overturns the theory of Helmholtz, that colour-blindness arises from the absence of certain fibres of the nerve of the eye.

THE Paris correspondent of the *Lancet* makes an announcement which is calculated to carry widespread dismay among teetotallers. He says :—"M. Muntz, director of the laboratory of the Institut Agronomique, has, by means of an apparatus of his own invention, discovered the presence of alcohol in water. It is true the proportion is almost infinitesimal, yet it is sufficiently appreciable for him to have fixed it at one hundred-thousandth part and even less. In pushing his experiments further, he discovered the presence of alcohol in all the natural waters—such as those of the rivers and the sea, and even in rain water and melted snow. For instance, in the water of the Seine and in rain water the proportion of alcohol was about one-thousandth, or one gramme to each cubic metre. The proportion was about the same in the sea water, but a little greater in cold rain water; the proportion was also sensibly greater in sewage water. From the presence of alcohol in rain and river water, M. Muntz concludes that it must also exist in the air, and even in the interior of the earth; so that it may be said to exist everywhere in nature; but he is at a loss to explain its origin. He, however, sets forth the hypothesis that it is produced by the decomposition of organic matter existing on the surface of the globe, in the depths of the sea, and in the different strata of the soil, and after its production, and in obedience to the laws of the tension of vapours, it is diffused in the atmosphere, from which it is eliminated with the meteoric waters."

THE maturity of man, calculated by the completed condition of the skeleton, says a writer in *Our Homes*, is twenty-one years. Twenty-one years multiplied by five—105 years—is, therefore, the natural duration of the life of man on this estimate, and, with a certain natural limited range, may be accepted as the true and full duration. But when the actual value of life is taken it is found to present, in this country, an average of forty-two years, so that there are grand agencies at work which are reducing the national life to a very low value. If the inquirer enter further into the matter he will observe that the grand agencies leading to this reduced value of life must be in some way removable, because they are not always in action to reduce every form of life to the same level of duration. He will discover that the domestic animals which surround us, if we

do not kill them outright by hard labour, privation, or exposure to the vicissitudes of seasons, are so much longer lived than we are, that they exist, practically, to their full term with as much exactitude as we exist to the first of our second stage of existence. Or, to put the matter in another light, he will discover that if our lower domestic animals were to die in the same ratio that we die, their duration of life, as it is now known, would be reduced nearly to half what it is. The dog would have an average term of eight years, and other animals a similar reduced term of life. Such observations as these will lead the sanitarian to find a uniform object in his labour. He will ask what is the reason why man, who holds all the knowledge and skill above the brute creation, should have so little control over his own destiny that he cannot control it in respect to health and life as well as the inferior creature which, compared with himself, has neither reason nor skill. He will wonder in vain so long as he looks simply at the general fact. He will not wonder at all when he proceeds to an analysis of all the details upon which that general fact depends. In the first place he will learn from an analysis of the data he may collect, that man is the subject of many more diseases than the inferior animals are; that he suffers from certain diseases of the mind incidental to his possession of a mental organisation superior altogether to theirs, and from which diseases they are exempt; that he suffers from some diseases springing from human vices from which the lower animals are also exempt; that he suffers from some contagious diseases from which they are exempt; that he suffers from some diseases connected with industrial pursuits from which they are exempt; that he suffers from indulgences in certain luxuries of a deadly kind from which they are exempt; that he suffers from various accidents from which they are exempt; that he suffers from hereditary taints of disease from which they are exempt.

Answers to Correspondents.

J. P. (Hanley).—We have received several communications in regard to the proposed Phrenological Society similar to your own, but we forbear printing them because they seem to be rather wide of the mark. Mr. Webb's proposition was intended to bring a good deal of vague wish and suggestion to a focus; and until those who desire to have a society formed agree to meet and talk the matter over, little is to be gained by adding letter to letter, and comment to comment.

S. E. B.—We may print your letter next month, but cannot promise. We cannot insert letters of personal inquiry of the nature of that you send.

Dr. Taylor (Liverpool).—Next month.

THE
Phrenological Magazine.

JUNE, 1882.

CHARLES BRADLAUGH.



THE following character of Mr. Bradlaugh was dictated in September, 1864, and without my knowing who it was I was describing, for Mr. Bradlaugh came to me as a perfect stranger. I say this, because it is a criticism not unfrequently made, that it is not difficult to write the "phrenological character of a man whose life and actions are before the public." It is for those who have studied Mr. Bradlaugh's public acts better than I have to say whether the "character" is in harmony therewith or not.

I may say that since the description was given, Mr. Bradlaugh has changed in several respects.

His physical constitution has greatly improved, probably from the hints thrown out in the delineation, for then the mental temperament greatly predominated. Now there is a much greater indication of the vital and motive temperaments. His mental powers have also developed into greater proportions, and have become established so as to indicate a fixed character peculiar to himself, and it is in striking harmony with the development of his brain.

"Your organisation, as a whole, is available ; you can use all the power you possess, and it will be difficult for you to properly restrain yourself. You are inclined to put too much powder in your gun, and fire as though you had large game every time. Your brain is over large, and your bodily energies are a little inferior. You have scarcely enough vitality, even with prudence, to live to old age, but if you are imprudent, and give yourself up to mental exercises, to late hours, and severe labours of the brain, you will probably shorten your days very materially. You need about as much time for physical exercise and growth as for mental labours.

“Your brain is very remarkable for its foundation, some of the organs being decidedly large, while others are only moderate, hence you have not so good a balance of character.

“The leading features of your mind are as follows: First, you have a general inclination for thinking, are decidedly original, quite quick to see the bearings of a subject, and specially analogical and critical, as well as discriminative in your mode of reasoning. Secondly, you are very forcible and executive; you take hold in good earnest, and work with all your might at whatever you do. You are liable to spend almost too much energy in the gratification of your various desires. Your Destructiveness is large enough to give the elements of great indignation, and you feel at times as though you wanted to demolish something. The third feature of your mind is your independence, self-reliance, confidence in yourself, desire to maintain your own individuality, and carry out your own plans and purposes. You are also characterised by your will, determination, positiveness of purpose, and power to decide definitely what you will do, and what you will not.

“You have almost excessive Benevolence, your sympathies and feelings are both comprehensive and strong. You have rather large Combateness, which gives the spirit of opposition, and the disposition to resist all encroachments; this, combined with your Self-esteem, tends to self-defence; and you are urged to go where there is opposition rather than to avoid it. You would prefer to be the medium through which opposition should be manifested rather than to be a silent looker-on.

“You have not much Veneration; the feeling of adoration, dependence, and respect is defective. You have a fair degree of Spirituality, and are not entirely wanting in consciousness of the marvellous, but your spiritual nature is not so strongly represented as your love of the extravagant, and that which is not of the ordinary course. Your hopes are fair, but not particularly great. Your sense of guilt is not strong; you do not feel like condemning yourself—are not conscious of being very wicked; you do not harbour those ideas that lead to self-condemnation, so much as most persons do. If I wanted to bind you to your word, I should swear you on your honour. You are much more proud than vain, and have a high degree of confidence in your own abilities.

“Your social brain indicates, in a marked degree, love of children, with rather strong conjugal love, but not much passionate love. You are much attached to home and place, and prefer to have a settled place that you can call your home, still you may travel for special purposes. You are

connected in your modes of thinking, and can carry out a long process of mental action. You have a superior memory of ideas, associations, and similar circumstances. You have good powers of observation, a good local memory, and a superior faculty to arrange, systematise, and present your thoughts and opinions in a methodical manner. Your Order would be more likely to manifest itself mentally than physically. You are ingenious—if not so in the use of tools, you are so in argument. You are particularly disposed to devise ways and means to accomplish your ends. The restraining powers of your mind are not so great. You have



intellectual prudence, but not much sense of personal danger, and there is no fear of you taking too good care of yourself. You are quite transparent in your thoughts and feelings, and if you have cunning it is more acquired than natural. You value money for what it does, and the enjoyment it affords. You appreciate beauty, elegance, and style, but you prefer thought, philosophy, facts, arguments, and that which is substantial and useful to that which is merely showy and captivating.

“You are clear and rather forcible in your style of talking ; you may occasionally hesitate for words, but can usually talk

with very little hesitancy, and in a very free style. You remember faces and places accurately, names and dates not so well. You judge of character and motives almost instinctively. You were as much of a man when a boy as now, and will always feel youthful. You never had much of that kind of mind that puts on airs for the sake of pleasing others.

“You are adapted to a variety of pursuits, among which the following may be named. You could succeed in literature, as a teacher in the sciences, in the law, as a speaker, a politician, or a statesman. You would not do so well in mercantile pursuits, in mechanism, manufacturing, nor in the details of a retail trade.

“You will find it necessary to pay very particular attention to your bodily conditions, to avoid stimulants, dissipation, and all undue excitement. Take life as quietly, steadily, and uniformly as possible, and you may, by careful habits, reach a good old age.”

It is a work of some difficulty to summarise the chequered career of Mr. Bradlaugh. He himself has attempted it with indifferent success in a brief “Autobiography,” clear enough so far as the narrative of events is concerned, but lacking somewhat in human interest. He was born at Hoxton in 1833. His father was a struggling, indefatigable solicitors’ clerk, who could but ill afford to give his son Charles the scanty education which he actually received. At seven years of age he attended a National school in Abbey Street, Bethnal Green. Subsequently he was sent to a small private school in the same quarter, and in his eleventh year he completed his meagre educational curriculum at a boys’ school in Hackney Road, having acquired little beyond a knowledge of the three R’s. He is, consequently, for the most part a self-taught man, but he has taught himself to some purpose.

Mr. Bradlaugh was first employed as errand boy to the firm which his father served. In his fourteenth year he was equal to the more important duty of acting as wharf clerk and cashier to a firm of coal merchants in Britannia Fields, City Road. While so engaged, the serious troubles of his life began. In his sixteenth year he was a model young Christian, an enthusiastic Sunday-school teacher, altogether a promising neophyte of the Church as by law established. The Bishop of London was announced to hold a confirmation in Bethnal Green, and the incumbent of St. Peter’s, Hackney Road, in an evil hour requested his youthful Sunday-school teacher to be prepared with suitable answers to any questions that might be put by the Bishop affecting the Thirty-Nine Articles and

cognate matters. Like an obedient son of the Church, young Bradlaugh complied, and began to compare the Articles with the Gospels, but finding, as well he might, that they differed, he wrote a respectful note to his clergyman asking to be piloted through one or two of the difficulties. The ill-advised incumbent replied by informing the lad's parents that their son had turned Atheist, and that he had been suspended from his functions as a Sunday-school teacher for a period of three months. Young Bradlaugh refused to attend church during the interval of his suspension as a teacher, and soon began to spend his Sundays elsewhere and otherwise. The time—1849—was one of great religious and political ferment, and Bonner's Fields, near where the Consumption Hospital now stands, was the habitual resort of disputants of all kinds. Thither Bradlaugh repaired to mingle with youthful ardour in the fray—at first on the orthodox Christian side, then as a Deist, and ultimately as a full-fledged Atheist or *ne plus ultra* Infidel. How great a spark the rash, intolerant incumbent of St. Peter's had kindled! Mr. Bradlaugh's next step on the downward path was to become a teetotaller, and this brought matters to a crisis. At the instance of the reverend gentleman Mr. Bradlaugh's employers gave him "three days to change his opinions or lose his situation." Rather than succumb, the poor boy elected to go out from his father's house a social outcast, and throw himself on the stony-hearted world. Whether pride or principle had most to do with this Hegira it might be hard to say, but in any case the die was irrevocably cast. He soon became known as a boy preacher of the most audacious infidelity. But it did not pay. In his seventeenth year he found himself reduced to such straits that he was compelled to enlist in the 7th Dragoon Guards, and with this regiment he served for three years in Ireland, and there he did not neglect his opportunities. He studied the grievances of the Irish people on the spot, and hence his never-failing sympathy with that much-enduring race. By his hand was drawn up the famous manifesto of the Irish Republic which ushered in the Fenian agitation. In 1853, through the death of an aunt, he inherited a small sum of money, out of which he purchased his discharge and returned to London, quitting the regiment with a "very good character" from his colonel, who all along treated him with marked consideration. He was soon lucky enough to find employment in the chambers of a solicitor named Rogers, a liberal-minded man, who was proof against all the shafts of anonymous bigotry which were showered on him as the harbourer of Iconoclast. In this office Mr. Bradlaugh acquired a knowledge of legal principles

and procedure of which the most eminent counsel at the English Bar might well be proud. He again began to lecture in various metropolitan Freethought institutions, more particularly the Hall of Science, City Road.

In 1855 Mr. Bradlaugh had his first encounter with the police authorities in regard to the right of public meeting in Hyde Park. He carried his point, and was publicly thanked by the Royal Commission of Inquiry for the value of the evidence given by him on the occasion. In 1858 Mr. Edward Truelove, the well-known and personally estimable Freethought publisher, was arrested for issuing the pamphlet, "Is Tyrannicide Justifiable?" while Simon Bernard was at the same time incarcerated at the instance of the French Government for alleged complicity in the Orsini conspiracy. In the defence of both Mr. Bradlaugh rendered material assistance. "In October, 1860," says Mr. Bradlaugh in his "Autobiography," "I paid my first visit to Wigan, and certainly lectured there under considerable difficulty, the resident clergy actually inciting the populace to physical violence and part destruction of the building I lectured in. I, however, supported by a courageous woman and her husband, persevered, and, despite bricks and kicks, visited Wigan again and again, until I had *bon gré mal gré* improved the manners and customs of the people so that I am now a welcome speaker there."

In 1861 Mr. Bradlaugh was arrested at the instance of the Young Men's Christian Association of Plymouth, but he succeeded, thanks to his forensic skill, in wringing from an unwilling bench of magistrates a prompt certificate of dismissal. To the Reform League, in 1867, Mr. Bradlaugh, at his own charge, rendered most valuable services—services which, when his connection with the association ceased, were handsomely acknowledged in writing by the president, Mr. Beales, and the secretary, Mr. George Howell. To his marvellous courage and perseverance is it likewise owing that the last fetter has been struck off the Press of England. Up to 1869 every newspaper was required by law to give securities to the extent of £800 against the appearance of blasphemous or seditious libels. Mr. Bradlaugh, refusing compliance, printed his journal "in defiance of Her Majesty's Government," and so repeatedly baffled the law officers of the Crown in their prosecutions that the statute had finally to be repealed, the late Mr. J. S. Mill writing thus to the defendant in connection with the event: "You have gained a very honourable success in obtaining a repeal of the mischievous Act by your persevering resistance." Mr. Bradlaugh was likewise instru-

mental, after much costly litigation, in establishing the competency of Freethinkers to give evidence in courts of law. He carried a case, in which his testimony as plaintiff was objected to, from court to court till the Evidence Acts of 1869 and 1870 eventually relieved Freethinkers from a disability so grievous and unjust.

Towards the end of 1873 Mr. Bradlaugh visited the United States of America, and commenced an extensive lecturing tour, dealing with such subjects as English Republicanism, the Irish Land Question, &c. He lectured in all the chief towns of New England and the middle States, and met generally with a most cordial reception. At Boston, "the hub of the universe," the "silver-tongued Demosthenes" of America, Wendell Phillips, presided at Mr. Bradlaugh's lecture, with Senator Sumner and Lloyd Garrison on the platform beside him. Mr. Sumner described the great bugbear of English public life as "the Samuel Adams of 1873," the Samuel Adams of 1766 being "that austere patriot always faithful and true," who spoke the first words of defiant protest against the tyranny of English monarchical rule in New England. The shameless Tichborne imposture he smote with the hammer of Thor, and throughout the late Jingo episode in the history of the nation he was faithful even to the shedding of blood. At the second of the two memorable Jingo demonstrations in Hyde Park, he would in all probability have been killed but for his enormous bodily strength and personal intrepidity. As it was, his left arm, with which he protected his head from the savage blows of his assailants, fell powerless by his side before he could cleave his way with a heavy truncheon to a place of safety. Erysipelas supervened, and for three weeks his life was in peril. It is but fair to add that five of his foemen found their way to St. George's Hospital.

In his own way and by his own example he has inspired many thousands of the most abject of his countrymen with reinvigorated feelings of self-reliance and renewed hope on earth. He has taught them the inestimable lesson of self-help, of righteous indignation against oppression. On the other hand, like nearly all distinguished Atheists, he is a consummate egoist. He who recognises in nature no power greater than himself almost necessarily rises rapidly in self-esteem. There is very little room left for the Christian virtues of patience, humility, charity. Indeed, these are pretty much what Mr. Bradlaugh attributes to Christ as faults of character. There is no God, and Charles Bradlaugh is his prophet. This is the secret of his power. Not that it is meant to affirm in the least that Bradlaugh's egoism is incompatible with the common

weal. In a different way from Beesly or Spurgeon he has arrived at certainty. That is all. He might say, like Faust—

No scruples or doubts in my bosom dwell,
Nor idle fears of devils in hell.

Mr. Bradlaugh's more recent exploits—his election for Northampton, his ejection from Parliament, his triumphant re-election, and his present position with only one foot in the House—are matters still fresh in everybody's mind.

It remains to glance, briefly, at Mr. Bradlaugh's published writings. These consist chiefly of theological and political essays. His political works are accurate and of immediate interest. "Hints to Emigrants to the United States," in particular, no intending emigrant should be without. It is a plain unvarnished tale told by the most competent and impartial observer who has ever yet applied his mind to this important subject. His sketches of Cromwell and Washington, though biography is by no means his forte, display statesmanlike insight.

WOMAN'S WORK IN ART.

Such substantial headway is being made in the various branches of literature and science by the women of to-day, that it is no cause for wonder that the question is asked, "What are they doing in art?"

The ordinary meaning of the term decorative art, as used by the generality of people, is a narrow and restricted one, being mostly applied to crewels, embroidery, and silk; but when we remember that in a true and broad sense it embraces the vast horizon of applied art, we can predict that a useful future lies before any society animated by the spirit to encourage every effort towards a higher taste and adornment of home surroundings. Cognisant of several societies of the above-named excellence, we are made conscious that the women of to-day are laying such a foundation in art in its widest sense, that within the next few years there must inevitably be opened a broad field of art-work for women.

It becomes a source of great annoyance and pecuniary embarrassment to many ladies, to whom the struggle for bread comes late in life, to find (when they fly to art for their support) that because they did wool-work in the shape of grounding a banner-screen at school, they cannot find a sale for their work now. Is it needful to point out to such, that

had they applied themselves to the rudiments of artistic knowledge they would then have laid a foundation for their talents, which would have stood them in better stead than the supposition that they knew sufficient about art-work to compete even with students who had given their whole time and attention to the subject? It is because so many ladies make this mistake, and take up art as a means of support, before the necessary technical knowledge has been gained, that we deprecate such a course for the rising talent of the present day, and urge the necessity for more thorough knowledge. For it is readily acknowledged on all sides that as artistic knowledge stands upon as firm a foundation as any other, so, to win success in art as a profession, the knowledge must be as correspondingly thorough.

What does artistic knowledge embrace in its widest sense? It includes, first, decorative art, a taste for which has grown throughout the country, and not in England alone; for in America, as well as in England, art schools have been established which have already given remunerative work to women, and are likely to increase in importance year by year. In this department it is essential that a good knowledge of drawing be added to a taste for harmony of colour and design. Education in this department is not complete when flowers can be artistically arranged; a good idea of the fitness and adjustment of drapery is paramount. Simplicity must also be studied to that extent that the eye be not burdened with objects noticeable only for their prettiness; and taste which must be shown in the texture of material is not learnt in a day. At the Schools of Art, South Kensington, Queen's Square, and Lambeth, the best primary training may be had; but it is wisely recommended where decorative art takes a professional bearing, that the knowledge thus acquired in these schools should become more applicable under the finishing guidance of an artist, as studio instruction can be gained in no other way. Steps have already been taken to secure this latter instruction, and no doubt is entertained that before long every facility in that direction will be forthcoming. Some ladies, under this department of work, have given their attention to the designing of patterns for dresses, where their knowledge of figure drawing stands them in good stead, and has enabled them to accomplish a fair amount of work. It is stated that a revival of trade has commenced in the demand for art designs in wall papers as well, and some good orders have been given by publishers for figure designs for cards. This work we have reason to believe is well paid, because of the necessity of employing those of great experience. The

same is true with reference to painting on panels, for the same amount of experience and exquisite workmanship is required, hence the necessity of thoroughly mastering the art. Talents, power of application, position, and education vary so much, that while one could excel in bold outline, another could better excel in delicate finish. So that special instruction is needed in each branch of artistic work, though the fundamental knowledge may be the same.

Where a person can excel in more than one department of art so much the better, but, as a rule, where the work is entered upon professionally, such as wood carving, wood engraving, etching, painting on china, or plain tracing and decorative work of any kind, a proficiency can only be gained, on an average, by two to three, or three to four years' study. Ladies, as a rule (though there are exceptions), excel better in delicate design, and fine details, than they do in broad, extensive, and massive workmanship. Thus they can fill up many gaps left by either artists in wood or painting.

Until recently comparatively nothing has been done by way of helping women to cultivate their taste in wood engraving. On account of the high fees, many have been unable to use the advantages that have been offered. The Council of the City Guilds of London have now granted £300 annually to the "Society for Promoting the Employment of Women," so that now greater facilities are being offered by the School of Wood Engraving in the south of London by way of giving to girls who have a good elementary knowledge of drawing the opportunity of acquiring a thorough mastery of the art. As good English engravers are much needed, students should feel encouraged to persevere, as a useful and remunerative field of work is opening to them. As we have already remarked, a term of three or four years is required to acquire excellence; for bad engravers are not at all in demand. What with illustrated newspapers, and new books, all of which contain more or less of engraving now-a-days, there is ample work in store for competent workers. Thirteen students are at work this year, and some have already done a little work for publication, as the school has been opened since 1879.

Plan tracing is another branch of art that is applicable to women. The tracers at Queen Ann's Gate have earned from five to six pence an hour, or forty and fifty pounds a year in former years, and this last year £426 have been paid in salaries, £57 being the highest paid to any one person. Necessarily this is a work that fluctuates very much, and we believe great satisfaction has been given by the neatness and

accuracy of the tracings executed. Ladies of the present day have quite a mania to paint on terra-cotta, china, wood, ivory, satin, and glass. Of course, their success mainly depends upon their artistic qualifications. Many ladies are inclined to think that painting on a flat ornament is so much easier than picture painting, and that fewer lessons are required; still, as it has been truly suggested, they have the design to work out, and no one can learn the art of design in a day.

Though glass and china painting can be excelled in by ladies, greater risks are run through this branch being allied to the mechanical crafts of cutting and glazing. It is curious to note what effects can be arranged by the leading of window panes so as to throw out the shadow of the picture. The progress in wood carving is necessarily slower than the progress in wood engraving, for the present cost of articles carved is a great drawback to a large demand, only those who have ample means at their command being able to indulge their taste for it. Competition is also very great with foreign importers who can afford to offer their carved goods much cheaper than the work can be done in England. The report from the National School of Wood Carving at the Albert Hall says, that the six young ladies who had successfully passed the Second Grade Art Examination of the Science and Art Department, who were admitted as free students in 1879, are working steadily, and making good progress. It is the aim of the school to introduce a more artistic style of carving in the decoration of homes and furniture, and every effort is made to get good designs for the pupils. Students who have been a year at the school may, on the recommendation of the Institute, receive such payment for their work as the committee may determine.

Is not education a little at fault when girls are taught "accomplishments that accomplish nothing," and who, therefore, know nothing of the sterling qualities necessary to make proficiency in any one branch? Every girl is animated with somewhat of an ambition to excel in music, whether she has gifts that way or not. If, however, her talents and tastes were truly consulted, often much time and expense would be saved by directing her energies in a more useful and remunerative channel. Many young ladies of intellect and superior talents are, however, taught to believe that to enter upon any work thoroughly with the faintest thought of using that knowledge for future self-support is lowering. If, however, those loving parents could but see their once-cherished daughters, years afterwards, toiling at an unknown trade or profession, would it not make them repent of their mistaken

kindness, when health, energy, and soul might, during youthful days of idleness, have made them competent in the work that has now become a drudgery, because of their inadequate knowledge.

"Does the daughter's respectability consist in her unsoiled hands and inactive brain?" is a question that should be answered by the head of every family of daughters. Man, though great, is not infallible, hence he cannot see when the habits of luxury and idleness must cease in a woman's life, though he may have done everything to foster them in girlhood. Is it a right compensation to the Author and Giver of all talents to allow them to lie idle for the want of a spur, and when the spur of necessity comes late in life to complain that they do not produce more? The A B C of art-work cannot be gained for the asking; and it is because there are so many ladies who have been called to steer the wheel of fortune that we congratulate the young ladies of the present day that the avenues of usefulness are widening every year, and that now facilities in the various branches of art-work are so much greater than they were fifty years ago. While England is doing her best to promote an artistic education among her daughters, America is also putting forth the same effort, and in the Centennial Exhibition much beautiful, ornamental, and useful work was shown.

The women of Washington, Cincinnati, Boston, New York, and, in fact, all the large cities of America have established art schools. In St. Louis we find ladies belonging to the Academy of Fine Arts. This city, besides being an important commercial centre, is fast becoming a metropolis of education, culture, and art. In Washington, one of the most attractive places of resort to the student of art is the Decorative Art Salerooms, established by the Misses Halsey, who are constantly bringing out new ideas in decorative art. In Cincinnati the ladies have an establishment for working out a new kind of pottery from various kinds of clay for decorative purposes. Instruction is also given by ladies in under and over glaze painting, and in modelling on Limoges. So in one way and another the great panacea against idleness is being raised, and soon idleness will be looked upon as a sin. Let ladies talk less about art, and fit themselves more studiously for the work, and the results will be such that our question will be answered. Women are doing good work in art.

J. A. F.

LECTURES ON PHRENOLOGY.

BY DR. SPURZHEIM.

LECTURE XIV.

I shall now fulfil the promise that I made at the conclusion of the last lecture, namely, to show the influence and usefulness of phrenology. Then I had the honour to state several points interesting to artists ; to-day I come to another consideration, which is to see how far phrenology has any influence on the systems of philosophy.

It is the true object of philosophy to point out the fundamental powers of the mind ; and if we have succeeded by phrenology in showing thirty-five,* I think we have done more than any philosophers hitherto. Whatever has been done in philosophy may be reduced to a few simple ideas, for philosophers have merely pointed out the effects of powers and their general modes of action, leaving the powers themselves undescribed. The effects of powers only : I shall not say that what hitherto have been considered as the powers of the mind are not in existence, or that they do not take place, but all the things which have been mentioned as the primitive powers of the mind are not powers ; they are only the effects of powers, or the modes of their action, and we have, therefore, to see how far phrenology can be brought into harmony with the philosophy of the schools.

It is a common opinion that the mind is composed of Understanding and Will. What is will in a philosophical sense? They commonly ascribe to it a kind of desire, or inclination, in the lowest degree ; and in the highest degree it is called passion. Admitting that there are different kinds of will, will you be inclined to call every sort of desire Will? and can this be admitted as a fundamental power? I suppose, now, that an individual feels an inclination to do a thing, any thing whatever ; one of the lower propensities is active, and gives an impulse ; now, if you call this will, and if you consider it as the effect of a fundamental power, you might will to kill another, but then, having understanding also in the composition of the mind, your understanding says you must not kill. Suppose you feel hungry and wish to eat, and your physician should say no, you must not, it would do you harm ; how can you explain this by reference to the will as a fundamental power? you will and you will not at the same time. How

* There are now forty-two recognised primitive powers of the mind.

can you explain it? Then you must speak of a good will and a bad will; you may have a will to take away a thing you may see, and conscience says no, no, you must let it alone; here is one will for, and another against. This sort of doctrine is not at all practicable; I have tried such philosophical opinions, and I have found that no use whatever can be made of them in practical life.

I shall come to-day to the individual application of the various doctrines which have been held respecting the mind.

We will with reflection, and sometimes not with reflection! how can we understand this? What is the will or desire in this general sense? I say that desire or will, in this general sense, is the effect of the operation of individual powers, and that there are as many sorts of inclination, or will, as there are fundamental powers. If I have adhesiveness, I wish to be attached; if I have combativeness, I wish to fight every one who attacks me; if I have great self-esteem, then I wish people to think me very important; if I have benevolence, then I wish every one to be well taken care of, and so on; having specified the powers, it can be easily understood that the will must be as various as the powers. We see that there are, therefore, thirty-five* sorts of desires, and perhaps more, and yet all these pass under the general name of the will, or desire.

We come now to other terms in very common use—Pleasure and Pain; what are these? Is there something primitive called Pleasure, and something primitive to be called Pain? Those who attend to the education of children know that some manifest great inclination for, and make great progress in, certain branches of science; one makes great progress in mathematics, another in geography, and another in history; now how does this happen? The general answer is that they are amused; but how comes it that one is amused with mathematics, and another with the mechanic arts, and that sometimes the greatest pleasure is felt by such persons in one sort of study and not in another? Can you explain this by the philosophical knowledge of the schools? Impossible. How comes it that what gives the highest degree of pleasure to one, produces a different feeling to another; why is it that every man has his peculiar feelings of pleasure? It is impossible to answer this by referring to any single power, quite impossible. Pleasure is the result of the gratification of a power, and desire is the activity of that power. There are as many sorts of desires as powers, and the powers being satisfied afford pleasure; hence as many kinds of plea-

* See foot-note on p. 233.

sure as powers. Now we can easily conceive that what is a heaven to one man may be a hell to another, and there are some individuals who thus express themselves; they cannot conceive how any person can be indifferent to what affords them so much pleasure. Phrenology teaches us why those who have the powers active are pleased. When the power is active, the desire is active, and the desire being satisfied affords pleasure; hence, we must give up the erroneous idea that the pleasure must be the same for all, and this is generally overlooked in society; everyone wishes that another may feel like himself, but that cannot be, in my opinion. There are some who, unfortunately, labour under the deprivation of certain feelings, and call forth strong expressions of sympathy from some, and others take little notice of them, and then, say the first, "how can you behold these things with indifference?" One would say, "to be approved of before the whole world is heaven;" and another would say, "pshaw! what is that to me?" Some have greater pleasure in the indulgence of the higher feelings than the lower, and others cannot imagine how these can afford any pleasure. Hence, in specifying the pleasures, and showing that they are the results of the gratification of the fundamental powers, the subject becomes clear, but in the common mode of expression it cannot be so.

We come to another subject, on which a great deal has been said, namely, to attention; nothing is done in the schools without attention, and I flatter myself that you are all attentive; what is this attention? All philosophers have spoken of a power of attention, but how can they explain why, in practical life, some are attentive to one object, others to another; or why, among animals, some should attend to certain objects more than others? The eagle and the fox are attentive to a hare and a goose, whilst a sheep is attentive to neither. Is there a power which gives attention? Yes, I would say, it is destructiveness in these animals, and the sheep having no destructiveness, has no attention. In schools, some children are very attentive to their teachers, when speaking of certain things, and the same boys would be very careless in other things; we must have an explanation of this, if we wish to have any practical knowledge. In mixed companies, if you will tell stories, all are attentive, but if you reason with them I would not say they would be so. Some, who are attentive to mathematics, would fall asleep whilst others were talking of music, but where the fundamental power exists in the mind, the attention is directed towards it, and hence there are as many sorts of attention as there

are fundamental powers. We do not deny the existence of such a thing as attention, but we deny that it is a fundamental power, and hence phrenology explains why some persons will be attentive to some things, and other persons to others. Philosophy is too general in the terms which are employed in it, for whenever we want exact knowledge we must specify. Suppose that, in speaking of an animal, I should merely say that it was an animal, would that satisfy you? You would require to know what animal; I might say it was a bird, but as there are several genera, you would then ask of what genus it is, of what species, then of what variety, and in the end you would want to know whether it was male or female? With the mind it is the same; it may be reduced to a few species, to a few fundamental powers, and this must be done before we can be satisfied with our philosophical knowledge, and phrenology has done this better than any other thing which has hitherto been attempted. Hence, there is no peculiar power of attention; attention is merely the result of the activity of a power.

There is another opinion, just as prevalent as the former, respecting the passions of the mind. There are passions, various passions, but is passion a fundamental power? Not in the language of phrenology, which will teach us, that as the powers of mind are influenced in different degrees, so will the exercise of some of them, in the highest degree, be called passions. I am angry; is there a power of anger? I may have a sensation of itching on any part of my body; is there a fundamental sensation of itching? I may have a peculiar sensation produced, called tickling; is there any primitive feeling of that kind? No. There are modifications of the senses called sensations. The sense of feeling may be affected in different ways, agreeably or painfully. There are modes of action in the sense of feeling; it is the same with the different internal powers, they are differently affected, and it is a great point in phrenology to show the affections of the individual powers, but not to consider them as fundamental faculties. Where will you place anger? will you place it with benevolence, or veneration, or justice? I do not think that anger takes place in the powers proper to man; it is a fact that it exists in animals; and even in the lower animals we find that they are sometimes angry even to fury, but there is no fundamental power of anger. Persons are very fearful; where will you place fear? Is it a power? No, it is an effect. I think that great circumspection, with little combativeness in the same character, would produce fear. We feel compassion and we feel remorse; to what powers are they attached?

Indeed, it is quite a peculiar study of the mind to point out what are called the passions ; some are the results of individual powers, and others are the products of a combination of powers.

Where will you place jealousy ? We have not spoken of an organ of jealousy, and yet you know there is such a feeling as jealousy. Some cannot bear to see others approved, unless they are approved of at the same time ; how comes this ? Jealousy is a combined effect of several powers and modifications of powers, according to their activity. If I am selfish, acquisitiveness being active, and if I have a good opinion of myself also, and have the love of approbation active, then if I see another approved of, I am immediately jealous of the same approbation. Suppose I have acquisitiveness very strong, and see another get rich, and if I should not have succeeded so well, then I am jealous of his being rich before me. Some people, on the other hand, are never jealous ; hence I think it will be seen, this feeling, like others, is produced by the activity of the combined powers, and not of the individual powers. The passions are not fundamental powers, but are the results of the activity of singular or of combined powers, and I therefore wish that when passions are spoken of they may merely be intended to indicate the highest degree of activity of the powers. I have mentioned that the nomenclature of philosophy is vague, and that we can never be clear in our expressions unless we become clear in our knowledge of the powers of the mind. If we can show the modes of the activity of a power, then let us give names to them, but do not let us confound the power itself with its application. Passion, then, indicates a certain degree of activity in a power or powers, but the higher powers of the mind have scarcely any influence on the feelings. You may take pleasure in every power when very active ; your reflection has little power over your feelings. Unfortunately the lower feelings can be very active, and they will not listen to the superior feelings. Some think that when the superior feelings are active, that their products ought not to be called passions ; but if you will admit that the same degree of activity may be displayed by all the powers, and if we admit a high degree of activity to be a passion in the lower feelings, let us admit the same in the higher. A musician may have his attachment to music so strong, that he sings wherever he goes ; if sitting at table, or anywhere else, he must sing ; such a man may be called a passionate musician. Another man may have the power of constructiveness very active, and he may ruin his family by being continually engaged in building, rebuilding, and so on ;

the highest degree of activity of the mind may be called a passion. If I speak of the intellectual powers, strictly as they have hitherto been considered, such as the memory, judgment, and imagination ; these all exist, I do not deny it, but I deny that they are primitive powers. Attention exists, but it is in the effect of a power being directed to an object ; if we have size very strong, we shall be attentive to the dimensions of objects. Now, we see that, in the schools, attention is every thing, nothing is to be done without attention ; there must be attention to teach, and attention to study ; I say yes, and the more attention the better, the more active the powers are the better ; but I do not admit attention to be primitive, and this is one essential part of phrenology. And so of memory ; there is memory, it is true, but will you not see some children show memory of one kind and others of another ? If memory were fundamental, would it not be applied in the same way ? Tell some children a fact, with dates and names, only once, and they will remember the fact perfectly, but forget the dates and names ; others will recollect the dates and forget names and facts, and others will not forget the names, but the dates and facts will be lost. Some children can recollect any place they have seen, and yet not be able to learn two lines from memory. In short, there are various sorts of memory, one sort strong and another weak. How can this be explained by phrenology ? The powers are active in different degrees ; the powers of the intellect remain the same in point of number as before, but they act differently. You will recollect that I have insisted on the difference between the feelings and intellectual powers, and again distinguished the latter into such as are destined to make us acquainted with the external world, with the qualities of objects and their relations ; now all the intellectual powers may be so active as to reproduce in the mind the perceptions it had before seen. I have seen a figure, and I recollect the figure, my constructiveness has the power of reproducing the image in my mind as perfectly as I at first saw it ; I am the witness of a fact, I know how it happened, and that is called memory. I have seen a number of persons, and I recollect the number I saw. I have seen colours, and I have all the colours now in my head ; I have the memory of them ; hence memory is the higher degree of the activity of a power, but not of itself a fundamental faculty.

I may here observe that the feelings are not what is called memory. Can you remember certain feelings ; can you reproduce the sensation you have felt before ? You can reproduce an impression you have received through the intellect ;

you have received a knowledge of individual objects, of their sensible qualities, of their place, number, size, colour, and so on, and you can reproduce these impressions on the mind, but you cannot do so with the feelings. I have before said, that the feelings must be felt, they cannot be taught. Can you reproduce these when you like? can you say I will be hungry or thirsty? You may know that you had the feeling once, but you cannot, by any effort of any power, bring back that feeling. Whenever we can reproduce the perceptions we had before, we call that memory, and it is the result of the activity of a power; and we have, therefore, as many sorts of activity as there are different primitive powers. You can easily conceive, now, the error of the notion so prevalent in education, that by the exercise of one power you can excite the action of the other powers; that each power may become more and more active by exercise I shall hereafter have occasion to speak about; but you cannot, by putting one power in action, put all into action; if I exercise my eyes, do I exercise my ears? We advance a step farther, and assert, if the individual powers which have been displayed by phrenology exist, then whatever may have been the notions hitherto entertained by philosophers must undergo a change. Either phrenology is true or not true; if true, the fundamental powers have been ascertained, and we must attend to them.

We next come to the Imagination, and there has been a great discussion amongst philosophers about this term; but is there anything primitive in the mind which disposes it to invent? How comes it that one man has invented mechanical instruments? They say it was by his imagination. How comes it that another composes music only? The answer is the same, by imagination. Another solves mathematical problems, and he does this by imagination. Do you think that the power which can compose music can invent machines? or that the power which can solve intricate mathematical problems can invent poetry? You will see that the inventions are different as the activity of the powers differs. Invention is not a fundamental power, but it is a high degree of activity of one or more powers. Observe an individual who has melody, and time, and various other powers; just see how the tones will come out in harmony and order. Go to another who has form, size, and constructiveness, and you will see how the mechanical powers will be active; give him ideality, and see if he can make poetry. The powers become active, but they do not acquire the perceptions from without by memory, but they will invent; the powers themselves will act. See if a mechanic discovers new principles; he will

make new applications of the principles already known, but will not invent new principles. Hence one will have a great imagination in a certain line, but not in another, and phrenology can explain this, since the powers are so different.

As to judgment, is there a fundamental power of judgment? Not in my opinion. We see persons who can judge perfectly well of colours, but not of music. Some can judge well of mathematics, but not of poetry. Persons may reason well and judge soundly on one subject, but not on another. I feel the greatest difficulty to make myself understood here. In my opinion, the individual powers I have before described, being fundamental, are submitted to laws, and it is a fundamental idea in philosophy, that all the powers of nature act according to determinate laws. The mathematics have laws; colours have laws. There are optical and acoustic laws. Do you think that the eye sees large what is small, and small what is large; or are these laws given to sight by nature? Can the musician say, I will place together just such tones as I please, and they shall be harmonious, or is he obliged to follow certain laws in his compositions? Can we say of digestion, that it is quite under the control of the will, and a person can digest whatever he chooses to put into his stomach? If so, let him eat a little hemlock. A painter cannot bring together whatever colours he may choose, and say they shall make such a colour; nor can we, as animals, breathe in every gas. There are laws to be observed and obeyed, and this is the first idea I wish to present, in order to make myself understood. When the powers act in a perfect manner, then we may say they judge correctly; but they may act perfectly or imperfectly. Suppose, now, that digestion goes on well, but the secretion of the liver and inspiration may go on perfectly or imperfectly; if imperfectly, then we call it disease. We come to the senses, to the taste; and if the taste be vitiated, as it is sometimes, by which persons will wish to eat charcoal and clay, then we say that such a being has a bad taste. There is a power of configuration; is it submitted to laws? Can a person having this power say, I shall find ugly things beautiful? We want to know whether the activity of the internal powers is going on right or wrong, and it is this sort of decision of the internal powers acting perfectly that we call judgment. In the arts, this power is sometimes called judgment, and sometimes taste. The greatest activity of a power does not always indicate the best judgment. We compare here the operations of the mind with those of the body, and we find that it is not every one who has the best appetite that has the best digestion; not every one who has

a fine ear that has a perfect action in the ear ; nor has every one who has a good taste a delicate taste. Some who are fond of music are not capable of judging correctly of its merits ; some who are fond of colours are not capable of judging of them ; hence we may have as many judgments as there are powers. There is no fundamental power of judgment, but it is the attribute of the powers I have already spoken of.

What we call a philosophical judgment in the reflective powers, what is that ? The judgment of each power is confined to itself, as colour, melody, configuration, &c. ; but as we have spoken of certain reflective powers which act differently from others, we perceive these powers sometimes to be active, and when they are active, then the result is that which is called a philosophical judgment : but it is not of itself a fundamental power, it is merely the perfect state of action of the individual powers. One may have a perfect action in comparison, but not in causality.

Is there a power of association ? Association takes place we know, but is there a power of association ? It is supposed, in general, that one power excites another. I may see a colour, and it may remind me of a person I saw with clothes of that colour, of a thing of that colour. Is there a power of association ? There is a combination of the individual powers, but those are wrong who speak of an individual power of association. Thus we are able to rectify by phrenology the abuses of philosophy, and whatever has been said, by philosophers of the mind, can only be explained by reference to the individual powers themselves, and then we have seen how diversified are the modes of action, which have been mistaken for primitive powers. We have taken quite a new step to-day, particularly as regards the modes of action of the different powers.

Now I wish to touch on another point, after having examined the powers themselves, their natural language, and their modes of activity, and this is certainly a very important part of the subject, to study the modes of the activity of the powers ; I come to the mutual influence of the powers ; no power acts alone, all the powers act in a combined way, and in this combined operation there are various subjects to be considered. First, How the powers ought to act. It seems to me, that the powers are given, according to certain rules, as they ought to act ; therefore let us first look at men as they ought to be, and then as they are ; but we always wish to see mankind act as they ought to do. The mutual influence of the powers opens a wide field of study ; an immense fund of

phrenological inquiry is open here, to examine the mutual influence of the powers, and this is necessary if you wish to speak of actions. You must, I repeat, first discover the difference between the fundamental powers, next their different degrees of activity, and lastly, their mutual influence. The mutual influence of the powers produces a greater degree of activity in the powers individually, and therefore produces an infinite number of modifications of actions. A power being combined with two, three, or four other powers, will produce quite a peculiar action, very different from what it would do supposing it to act alone. The result of the combined operation of the powers will be considered in a future lecture. I wish now only to call your attention to one point, that of the powers which act according to determinate rules ; some take the lead, and others remain behind ; and the question for consideration is, which ought to take the lead, and which ought not ? Frequently I am told by a person, " You do not like to speak of my organs, because they are bad ;" but I say, " No, I do not, I cannot speak of good organs or bad organs ;" the organs in themselves cannot be good or bad, since these are only relative terms. Is water bad or good, or is fire bad or good ? You can only answer this question by making application of either one thing or the other, and then the application may be good or bad. Now comes the great question about arrangement.

Reflect a little on this, whether a man comes into the world with certain regulations in his powers ? The question is very difficult. I wish to know whether we can change the laws of nutrition, or of circulation, or of respiration ? I am always inclined to defend the rights of the Creator, and the laws of nature ? Can you change the laws of digestion ?

There are laws to be submitted to, but they are not sufficiently attended to ; and I wish to know whether there is any arrangement here, whether there is any internal law given to regulate the fundamental powers.

In my next lecture, I shall consider all the objections which have been entertained against phrenology, as leading to materialism, fatalism, and the destruction of all moral and physical liberty.

I VENERATE old age, and love not the man who can look without emotion upon the sunset of life, when the dusk of evening begins to gather over the watery eye, and the shadows of twilight grow broader and deeper upon the understanding.—*Longfellow.*

PHRENOLOGY AND ANIMAL PSYCHOLOGY.*

It is well known that a feud exists between the naturalists and the metaphysicians, or, as they prefer to call themselves, philosophers, on the subject of animal psychology. The latter gravely decide on *à priori* principles, or indeed sometimes assume without any grounds at all that "mere brutes" cannot lay claim to some particular faculty of the mind. The naturalists, on the other hand, true to their training, allow themselves to be guided by facts. If they observe in any animal the manifestations of a certain faculty or sentiment, they at once admit its presence, and do not seek to evade the issue by cunningly drawn definitions proposed for the very purpose of creating a "great gulf" between man and his "poor relations." Hence it may be suspected that metaphysical subtlety is rather a hindrance than an aid in the study of the animal mind.

Now it is somewhat singular that the phrenology of Gall, Spurzheim, and Combe, though in many respects hostile to the psychology of the metaphysical schools, entered into an alliance with them by assenting to the assumption of a distinction *toto cælo* between "man" and "brute." This view the phrenologists expressed in their arrangement of the "sentiments." They proposed one class as "common to man with the lower animals," and another as "proper to man." Under the former head they placed "Self-esteem, Love of Approbation, Cautiousness, and Benevolence." Under the latter they included "Veneration, Firmness, Conscientiousness, Hope, Wonder, Ideality, Wit, and Imitation." From this classification certain corollaries would follow, *e.g.*, that all animals, man excepted, differ little mentally among themselves, and that if on the phrenological theory each faculty of the mind has its seat in some especial portion of the brain, then a whole region of the brain present in man must be absent in the anthropoid apes, which would establish a very striking difference at once recognised by the anatomist.

In the very incomplete state of our knowledge of animal psychology, it may not be useless to examine whether the sentiments assumed by phrenologists as peculiar to man are really and truly absent in the rest of the animal creation. For our purpose it will not be necessary to enquire whether

* A reply to the criticisms contained in this article will be given in the July number of the PHRENOLOGICAL MAGAZINE.

these sentiments are in their nature simple and elementary, or whether any of them may result from the interaction of other primitive faculties.

We will begin at the end of the catalogue. Have the lower animals the desire to imitate the actions, manners, and gestures of other animals or of man? Affirmative instances are so common and obvious that we cannot well understand how the question can be raised by any person in possession of eye-sight. Imitation is as decidedly a leading or misleading propensity of animals as of men. It is distinctly prominent among sheep and monkeys, with the difference that a sheep only copies the actions of another sheep, whilst the so-called *Quadrumana* will very cleverly imitate the conduct of such human beings as they have the opportunity of observing—a characteristic not recurring with equal distinctness in any other mammalian group. I know of no instance of a dog or a cat being led to eat any unusual substance through seeing its master partake thereof. I have, however, witnessed two distinct cases of imitation on the part of cats. A daughter of mine was waving a sheet of paper up and down in front of a fire to dry it, when a favourite kitten which was sitting on the hearth and intently watching, waved its right fore paw up and down in the very same manner. On another occasion a young cat sitting on a flight of steps, watched a charwoman who was cleaning the flags of the area below. To my surprise the cat began to work its fore-paw round and round, imitating the rotatory movements of the woman's arm.

When a body of hunters dash through a pasture-field where cattle are grazing, the latter have been known to join in the chase, and clear hedges and ditches in a style little in keeping with their usual sobriety of demeanour.

Wit is another of the sentiments assumed as peculiar to man. Of course, as we do not understand the language of any of the lower animals, we cannot show that they indulge in humorous remarks. But it may be fairly assumed that a sense of the ridiculous, a comprehension of the nature of ridicule are causally connected with the sentiment of wit, so that where the former are present the latter cannot be altogether absent. Now, certain animals are sensitive to ridicule, and are greatly annoyed and offended if laughed at. That this is the case with dogs many persons know from their own observations. For the benefit of others I quote an instance narrated by Mr. G. J. Romanes, in "*Nature*," May 27th, 1875. A certain terrier "used to be very fond of catching flies upon the window-panes, and if ridiculed when unsuccessful was very much annoyed. On one occasion, in order to see what

he would do, I purposely laughed immoderately every time he failed. It so happened that he did so several times in succession—partly, I believe, in consequence of my laughing—and evidently he became so much distressed that he positively pretended to catch the fly.”

It may here, of course, be contended that dogs by constant companionship with man, may have acquired feelings or sentiments not natural to the lower animals. To this objection I give my usual reply ; if circumstances can create in a dog or other animal some sentiment entirely new, then the presence or absence of any mental feature is utterly inadequate to establish a distinction of kind between man and beast. But the same feeling is shown by monkeys, born in a wild condition, and existing as man’s captives rather than as his companions. This fact throws a strong light into the recesses of brute nature. A baboon, to be annoyed at ridicule, must understand human gestures, play of features, and tones of voice ; and, more than this, he must be himself capable of finding the conduct, appearance, &c., of other beings ridiculous. How else should he comprehend the very nature of derision ?

I turn next to ideality—that fondness for beauty which in man comes to light in phases so various ; from the craving of the savage for beads and feathers to the love for sublime scenery, for painting, sculpture, and poetry among the leading races. Do brutes appreciate ornament ? Beyond all doubt ; horses and elephants value their trappings and grow sulky if these are removed.

The phrenologists have, I believe, attempted to refer these facts to “Self-esteem” or to “Love of Approbation.” But these sentiments in such a case can only be brought into play through a love of ornament. Between the animals in question and the human being who glories in a compressed skull, in a tattooed skin, in a porcupine’s quill thrust through the nostrils, in compressed feet, high-heeled boots, a powdered face or head, or a wasp-waist, the interval is not very wide.

A love of ornament may be constructively shown in wild animals. It is well known that many birds at the pairing season assume, wholly or in part, a more splendid attire, described in ornithological works as the “nuptial plumage.” Does not, as many of the most eminent naturalists now hold, this brilliant coat of feathers serve the purpose of attracting the opposite sex ? If so, the effect could not be answered in the entire absence of a passion for ornament and of a sense of beauty. The Australian bower-bird gives plain proof of this sentiment. In the construction of his gallery he makes

use of the most showy objects he can find, and takes great pains in their selection and arrangement. Neither the nature of the materials nor the very existence of the gallery seems to subserve any mere utilitarian object. Some may, perhaps, say that "instinct" prompts the bird to collect and arrange all these baubles. But if this explanation can be accepted it will equally apply to the savage in his fondness for the very same articles. Perhaps the fact—now thoroughly demonstrated—that monkeys can recognise the likeness, coloured or plain, of a member of their own or of some closely-allied species, may here be taken into account.

Next follows in our list the sentiment of "wonder." In virtue of this feeling man, when he recognises anything outside the ordinary sphere of his experience, is more or less profoundly affected. Whether his interest in such phenomenon takes the form of terror or of pleasure—at least attraction—depends on a variety of incidental circumstances. But brutes also recognise an order of nature, and are startled by its apparant violation. Of this I once met with a striking instance. A dyer had a favourite poodle, upon which he exercised his art so successfully as to change its fleece from white to a full shade of magenta. I one day observed this animal following his master along a street, when a terrier ran hastily up to accost the stranger. On coming closer and perceiving the un-dog-like hue of the poodle he stopped short, gazed for a moment as if bewildered, and then fled. Fear—in the sense of physical apprehension—could hardly be the cause of his flight, as the poodle wagged his tail and gave every sign of friendliness.

Mr. Romanes—if I remember rightly, though I am not at the moment able to lay my hands upon the exact passage—describes the conduct of an otherwise pugnacious terrier on seeing a monkey dressed in human costume. He stood at first in astonishment, but, recovering, was about to make an attack on the strange being, when the monkey raised its hat and gracefully saluted him. This was too much for the terrier's nerves; he slunk away and was seen no more till the monkey had been removed.

Mr. Herbert Spencer ("Principles of Sociology") gives some cases of wonder or mysterious alarm displayed by dogs at occurrences transcending the limits of their experience. "One of these cases consisted in a large dog which, while playing with a stick, accidentally thrust one end of it against his palate. Giving a yelp he dropped the stick, rushed to a distance from it, and betrayed a consternation which was particularly laughable in so ferocious looking a creature. Only

after cautious approaches and much hesitation was he induced again to take hold of the stick." Mr. G. J. Romanes, commenting upon this case, gives further instances of awe, horror, or sense of the mysterious in dogs, which have come under his own observation. Speaking of a certain terrier, he writes:—"Like many other dogs, he used to play with dry bones by tossing them into the air, throwing them to a distance and generally giving them the appearance of animation in order to give himself the ideal pleasure of worrying them. On one occasion I tied a long and fine thread to a dry bone and gave him the latter to play with. After he had tossed it about for a short time I took the opportunity when it had fallen a little distance from him and while he was following it up, of gently drawing it away from him by means of the thread. Instantly his whole demeanour changed. The bone which he had previously pretended to be alive now began to look as if it were really alive. He first approached it with nervous caution, but as the slow receding motion continued, and he became certain that the movement could not be accounted for by any residuum of the force which he had himself communicated, his astonishment developed into dread as he ran to conceal himself." The dog, Mr. Romanes adds, was under ordinary circumstances by no means timid. He describes another experiment performed with the same animal:—"Taking him into a carpeted room I blew a soap-bubble, and by means of a fitful draught let it intermittently glide along the floor. He became at once intensely interested, but seemed unable to decide whether or no the filmy object was alive. At first he was very cautious, and followed it only at a distance, but as I encouraged him to examine the bubble more closely, he approached it evidently with much misgiving. After a time, during which I always kept at least one bubble on the carpet, he began to gain more courage, and became bold enough slowly to approach one of the bubbles and nervously to touch it with his paw. The bubble of course immediately vanished, and I never saw astonishment more strongly depicted. On then blowing another bubble I could not persuade him to approach it for a good while. At last he came and nervously extended his paw with the same result as before. But after this second trial nothing would induce him again to approach a bubble, and on pressing him he ran out of the room, which no coaxing would persuade him to re-enter."

Mr. C. G. O'Brien, of Cahirmoyle, County Limerick, writing in the same paper, gives also a striking instance of the sense of the mysterious in a dog. He says:—"Our terrier, a very queer

character and a great warrior, is abjectly superstitious. He will not come near a toy cow that lows and turns its head, but watches it at a distance with nose outstretched. A vibrating finger-glass terrifies him; indeed, he has so many superstitions that we often make him very miserable by working on his fears."

These instances abundantly prove that animals, like man, possess a sense of the marvellous. Though somewhat a departure from my subject I venture to point out that this is at the same time the surest proof of their possession of reason; unless they had some crude conception of an order of nature—some power of distinguishing between the probable and the improbable—nothing could excite their wonder.

Hope, the next emotion in the list, is easily dispatched. Unless dogs and cats hoped to receive scraps, why do they continue begging? Unless birds hoped to find to-morrow crumbs where some were thrown to-day, why should we find them assembled on a winter's morning around the breakfast-room window? In so doing they give at the same time inarticulate expression to their recognition of the law of continuity.

I come to Conscientiousness. The lower animals have the sentiment of right and wrong, of claims and duties. Rooks, for instance, have some rudiments of criminal law. Inveterate thieves are sometimes severely beaten, banished from the rookery, or even killed outright. These punishments are inflicted at a general assembly of the rookery. Now, law pre-supposes some notion of right and wrong, and could, therefore, never arise among beings incapable of making this distinction.

The following incident, which gives us a most valuable insight into the moral life of brutes, is recorded by Arago in his official *éloge* of Ampère. There is probably no scientific man in the world who would hesitate at recognising the latter as a trustworthy observer, utterly incapable of exaggerating or distorting any phenomena which he had witnessed. Travelling in the South of France—the exact locality is little to the purpose—Ampère had occasion to make a short stay at a road-side inn where a roasting-jack moved by animal power was in use. Two dogs performed the duty of turning the machine, working, as it appears, alternately. The dog whose proper turn it was not happening to be in the way, the other was caught and put in the wheel. He flatly refused, however, to work, and neither coaxing, threats, nor chastisement produced any effect. After some delay the missing dog was found and set to the task. After he had nearly completed the job, Ampère, who had been greatly struck with

the whole affair, proposed that the second dog should be released and the first tried again. This was accordingly done, and the animal so lately recusant now offered no opposition, and made the wheel revolve with a hearty good will till the roast was finished. This experiment showed that the dog's former reluctance was due not to idleness or ill-temper but to principle. He evidently considered that the work was to be fairly shared between himself and his companion, turn and turn about. This incident proves that brutes are able to understand somewhat complicated relations. Had the dog been willing to work whenever ordered, his compliance would have been simply attributable to docility, or fear, or to habit. We find him, on the contrary, obedient up to a certain point, but no further. What is this but the idea of duty and of right? He felt bound to work alternately with his colleague, but when expected to take two shifts in succession he knew that more than his legitimate duty was demanded, and that his rights were consequently invaded. This case alone is quite sufficient to prove that the sentiment of conscientiousness crosses the boundary-line between man and the brutes. It shows that the "actions of animals *are* accompanied by acts of conscious will directed towards the fulfilment of duty."

As to Veneration, its presence in the animal world has been established by hundreds of observations, summed up in the well-known aphorism "man is the God of the dog."

There remains merely Firmness, which carried often to the extent of obstinacy, is as plain among animals as is Imitation.

We find, therefore, that all the "sentiments peculiar to man" of the phrenologists are common to him and to some, at least, of the lower animals. How such an erroneous classification of the mental faculties came to be adopted is difficult to understand. Probably Gall, Spurzheim, and Combe were not close observers of animal life, and followed the "learned ignorance" of their day in denying to "brutes" all the higher sentiments. Should the science of phrenology ever be reconstructed in a form capable of harmonising with the results of modern research, this point must not be overlooked.—

Journal of Science.

A PRINCIPLE is a reliability, something you can trust in, safety as upholding you, security as protecting you, and serenity as enfolding you; symbolically it is your rudder to steer your conduct, and your compass to guide your conduct to the pole of right, as the end for which your conduct is pursued.—*Wilson.*

THE FACE AS INDICATIVE OF CHARACTER.

THE CHEEK.

There are two or three signs of character which, although not belonging strictly to the chin, stand in a certain relation thereto, and are therefore best referred to in this place. The signs of the neck are, in a way, supplementary to those of the chin. The length of the cervical vertibræ giving posterior extension and straightness to the neck, indicates a proud and very decided character. Such characters never go under the yoke; they are "stiff-necked," in the biblical phrase. One with this sign large remains firm and unshaken, although the strongest effort be made to bend him from his purpose, or to make him swerve from his convictions of right. When a man asserts his dignity he erects his head, and so makes his neck stiff and upright. When to this assertion is added defiance, the head is thrown still further back and a little sideways. Hence a man with a combative, overcoming spirit ever has his head, as the phrase goes, set well upon his shoulders. This sign and that of Independence, or Love of Liberty, are closely allied. The latter is indicated by the length of the trachea or windpipe, together with the larynx, giving length and convexity to the fore part of the neck. One who has this sign large has a passionate love of freedom, and cannot brook arbitrary authority and restraint. The sign is very large in the American physiognomy; it is large also in the French. One with this sign small has but little freedom of thought and feeling. Redfield remarks that Independence acts very much with relative-defence, as pride acts with self-defence; for in the cause of liberty we defend others, their firesides and homes, or the oppressed of other lands, as in the exercise of pride we defend ourselves and our own position. All long-necked domestic animals, as the horse, the camel, and the llama, have great love of liberty, which renders it necessary for them to be tied and held in with the rein.

In some persons a folding of the skin under the jaws may be remarked, and a tendency to what is called in animal, the "dewlap." The faculty of Subserviency is indicated by the loose skin on each side of the larynx, extending upwards under the chin, as shown in the cut (Fig. 93). When this

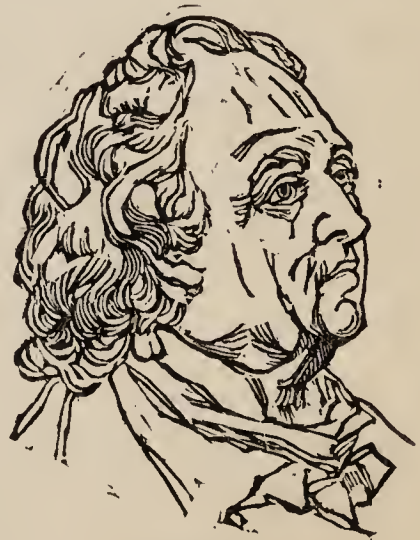


Fig. 93.

loose skin is not sufficient to form folds, as is generally the case, it indicates only an ordinary degree of the faculty. Subserviency gives the language and deportment of "your humble servant," and increases with years, being generally largest in old age. Hence it is that a large sign of it is so often met with in old people. The sign is large in the dog, who is always ready to fight for and receive kicks from his master.



Fig. 94.

The faculty of Submission is indicated by the loose skin over the windpipe, somewhat lower down than the sign of Subserviency. When the faculty is large, which is not often the case, the loose skin which betokens it forms a perceptible fold in the middle line of the neck. Submission gives the character of humility, without want of self-esteem, and manifests itself in the language and deportment of "your most humble servant." It shows itself in resignation (which is, indeed, synonymous with submission), and in bowing the neck to trial

and discipline, whether they occur in the dispensation of Providence or of civil society. The sign is very marked in the ox, who bows his neck to the yoke and his will to the command of his master, as no other brute will do. It is very large also in the turkey, forming in him the long, loose fold of red skin in front of the throat. The character of the turkey is in accordance with the sign.

The sign of Submission must not be mistaken for that of Economy. The latter is indicated by a fulness under the chin, making, when large, what is called the double chin. This sign is seen large in portraits of Franklin, noted, as "Poor Richard," for his proverbial philosophy inculcating habits of thrift. In one portrait of "Poor Richard" his thumb is on the sign of Economy. The sign, and with it the faculty, increases with age, and is a noticeable feature in many noted economists, bankers, &c. It is not so easy to detect it in the young, although its manifestations are by no means wanting in both young men and women of economical disposition. The aspirant to matrimonial felicity should not neglect this sign, remembering the saying which, if not always exactly true, is so near the truth that it may pass for such, namely, that when poverty comes in at the door, love flies out of the window. The sign of Economy is a very necessary feature in a woman, and it is certainly one of the "beauty spots" of a matronly face.

We now come to the signs of the cheek, some reference whereto was made when speaking of the temperaments. We then dealt more particularly with the fleshy covering of the cheeks, not so much with the bony framework. We now come to the latter features, and first of all to the cheek bones. The prominence of the corner of the malar or cheek-bone, under the external angle of the eye, as shown in the accompanying figure (94), indicates the faculty of Protection. This and the following sign and faculty correspond somewhat to the phrenological organ and faculty of Combativeness, or rather to its divisions of defence and defiance. One who has the sign of Protection large, says Dr. Redfield, likes to have good fences round his premises, is fond of stone walls and fortifications, and, if a general or a public man, will pay great attention to national defences. The sign is invariably large in distinguished military men, as well as in celebrated engineers; as, for instance, the builders of breakwaters, light-houses, fortifications, &c., whose works are so largely for defence. The sign gives a squareness to the upper part of the face. It will be observed large in the Chinese, who are noted for their conservative instincts; it is large also in the Dutch, who are obliged to build and constantly keep in repair extensive dykes and ramparts to prevent themselves and their *hollow land* from being overwhelmed by the sea. The sign will also be noted as being large in the ancient Egyptians, the builders of the pyramids.



Fig. 95.

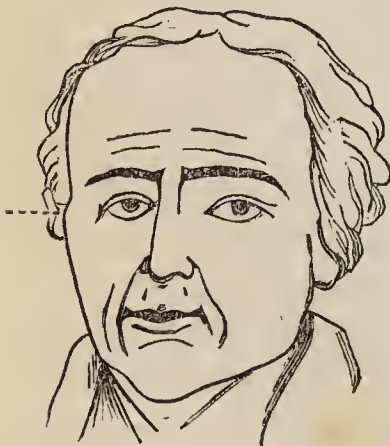


Fig. 96.

Protection corresponds with the division of Combativeness allocated by Mr. Fowler to defence. Defiance corresponds to the facial sign of Hurling. This is indicated by the breadth of the face, caused by the lateral projection of the cheek bones, next to the sign of Protection, and a little higher up, as indicated, in Fig. 95. Hurling, as the name signifies, gives a desire to launch projectiles. A boy with the sign large is exceedingly fond of throwing stones, either with the hand or with a sling, and is never tired of watching the effect of his missiles. The faculty gives delight in the clashing of arms, the din of contest, and the war of elements. The sign is large in firemen, and in those who run to fires and is

not unfrequently accompanied with a fiery red complexion, especially about the region of the sign. Hurling gives a threatening aspect to the visnomy, unless it is counterbalanced by other and more genial elements of character.

The elevation of the arch of the cheek-bone, called the zygomatic arch, indicates the faculty of Medicine (see Fig. 96). Some men are natural physicians; they have an instinctive faculty for curing and healing; their presence even does good to the sick and suffering; this natural faculty is the one we call Medicine. Without it there is no real physician, no true gift of healing. If a person has the sign of this faculty large, he will, other things being equal, be not only inclined to study and practise medicine, but will have a special instinct for it, which will greatly assist his scientific knowledge. Without this faculty and its sign in a superior degree, no person ever attained to skill and eminence in the medical profession, or ever made a really good nurse for the sick. Those who have the sign of this faculty small fall ill easily, but get well very soon of themselves, while the reverse is true of those who have the sign large. Hence the former should be trusted largely to nature and a proper regimen for cure, while the latter need careful medical treatment. It will invariably be found that celebrated physicians are largely endowed with this faculty and its sign. It is prominent, too, in those who are gifted with the power to heal by the magnetic or hypnotic power.

WEALTH AND WELL-BEING.

There seems to be some degree of confusion in the general ideas concerning wealth and well-being. The feverish eagerness with which some persons pursue the race for money, almost to the exclusion of everything else, would seem to argue that in their opinion, at least, the two were synonymous. On the other hand, there are some who, seeing how much of good is thus sacrificed, contend that the two are totally unrelated, and that each one can exist in its fullest sense without involving the presence of the other. Wealth is not necessary to well-being, they tell us; on the contrary, it interferes with it in so many ways that it is a most doubtful blessing. Perhaps one cause of these contradictory views may be that wealth itself is not very definitely formulated in our minds. We suppose, in a general way, that it consists of stocks and securities, houses and lands, and other property that has a

well-defined money value. A wider view of it might, however, embrace more than this. An English writer on the Economics of Industry divides wealth into two classes—material and *non-material*. The first of these includes what usually goes under that name; but the second “consists of those human energies, faculties, and habits—physical, mental, and moral—which directly contribute to making men industrially efficient, and which, therefore, increase their power of producing material wealth. Thus, manual skill, intelligence, and honesty may be included in the personal wealth of a country.” If this definition be correct, it follows that wealth, at least in some of its forms, is essential to well-being. For, though it may be a matter of dispute as to whether or not men can be happy without *material* wealth, no one will for a moment assert that they can be happy without those energies of faculties which are used in *producing* material wealth. The man who has become rich through patient industry, self-control, temperance, economy, foresight, and judgment, may retain a good degree of serenity if misfortune rob him of his riches; but if he should be despoiled of these desirable characteristics, no one could sufficiently picture his desolation and future misery. No one keeping this distinction in mind will indulge in that wholesale disparagement of wealth sometimes heard. If wealth means not only money, and what money can bring, but also the physical and mental powers, education, ability, and character employed in acquiring it, we can no longer afford to slight or underrate it. On the other hand, if this definition of wealth be correct, we see that the multitude who are rushing forward in the eager pursuit of material riches, regardless of their own welfare or character, or trespassing on the just rights of others, are really putting it out of their power to attain wealth in its truth and wholeness. They are sacrificing the whole to secure the part, and even if they succeed in gaining the part they crave, it will be a transitory possession, for riches without character will certainly make themselves wings. Everyone sees and admits the truth of this, with regard to a nation. The wealth of a country must certainly embrace both these elements. A fertile soil, a kindly climate, mineral resources, navigable waters, are among the material parts of its wealth. But the people who should be satisfied with this and make no effort to cultivate their own skill, energy, and power to act upon nature’s gifts would be the derision of the world. It is only by her *non-material* wealth that her natural resources can be made of any avail. The two together, acting in harmony, ensure national wealth and prosperity. As to which of them is the larger factor, all history and experience shows

us that it is not the material, but the non-material. Countries rich in every advantage of soil and climate, that might have yielded food for the world, have become mere wildernesses, because the inhabitants were indolent, spiritless, and weak, while barren and sterile lands have been reclaimed to usefulness by the hard work and patient energy of those who dwelt in them. And when to these qualities we add the superior skill and intelligence which education confers, and the moral qualities of a pure and upright character, which gives reliability and confidence to all business relations, we shall see that the balance is largely in favour of that part of wealth which is non-material. If the true wealth of a *nation* consists so largely in human force, skill, wisdom, and rectitude, so does the true wealth of an *individual*. What is freely admitted on a large scale cannot reasonably be denied on a small one. Not merely the tangible, but the intangible possessions must be counted in, before we can decide whether anyone is wealthy or poor. The mechanic may imagine that when he has added together the amount of his savings, the price of his homestead, and the value of his tools, he has accounted for all his wealth ; but how much he has omitted ! His strong arm, his expert hands, his knowledge of his trade, his physical endurance, his reputation as a superior and faithful workman—these are of more worth to him in the future, even in a money point of view, than all his material possessions. With them he can repair losses, and make good deficiencies, and, if need be, begin the world anew with good heart and courage ; but, rob him of these, and he is poor and pitiable indeed. Look at the young man who has drifted into a large fortune by inheritance or speculation, and has neither the force of character nor the judgment to use it wisely. Probably a few years will scatter it to the winds ; but even should he keep it, it cannot be true wealth to him, any more than a pile of diamonds could be true wealth to the solitary inhabitant of a desolate island. But the man who, by the force of his ability and character, acquires material possessions, has wealth in its twofold sense. And if he also employs that which he gains for purposes of good, and not evil, for himself and for others, he realises the true union between wealth and well-being.

A NOBLE heart will disdain to subsist, like a drone, upon others' labours ; like a vermin, to pilch his food out of the public granaries ; or, like a shark, to play upon the lesser fry.—*Barrow*.

A LITTLE KNIGHT-ERRANT.

I suppose every scholar in District No. 3 was standing on the bridge that afternoon. Not that there were many of them, after all—not more than a dozen perhaps, but they were all on the bridge; and this was the way it happened: Agnes Lowe looked so down-hearted as she left the school-room that Frank Morrison, who never could bear to see anything unhappy, from a girl to a kitten, had proposed a run down to the bridge to see the ice “go out,” for the river was breaking up for the spring. Now it happened that Frank was the hero of the school, not so much, I dare say, because he was much the best scholar in it as because he was the best skater, the best swimmer, and, to tell you the truth, the best boy not only in the school, but in the village. So Isabella Stillman said she would like to go too, and after that everybody wanted to go, down to poor Jamie West who was an idiot, but who was always treated kindly by the children, because Frank said it would be a shame and disgrace not to be kind to him.

I really must tell you why Agnes Lowe looked so down-hearted before we go any farther. The scholars had had a spelling and defining match that afternoon. When the teacher’s ruler came down on the desk with such a thump, and she said in such a terrible voice, “Scholars, attention! books aside! rise! choose sides!” Agnes always was frightened, and by the time the sides were chosen she had almost forgotten her lesson, though she had studied it diligently.

“Knight-errant,” demanded the teacher of her in a sharp, cross voice.

Agnes thought the teacher was always cross, but I know all about it, and the truth is she was only nervous and tired.

“K-n-i-g-h-t knight, e-r er, knight-er, r-a-n-t rant—knight-errant,” spelled Agnes, very slowly in a low voice, and then paused and began to blush.

Isabella Stillman on the opposite side, looking very trim and composed with her long light braids and clean starched apron, had already opened her lips eagerly to give the definition, when Agnes went on painfully: “One—who—is—brave and generous”—

“K-n-i-g-h-t knight, e-r er, knight-er, r-a-n-t rant—knight-errant,” spelled Isabella, quickly interrupting in a clear, distinct voice—“A knight who travelled in search of adventures for the purpose of exhibiting military skill, prowess, and generosity.” She spoke so rapidly that everybody admired her very much.

"Right!" said the teacher wearily, and not paying much attention, for her head ached. "Choose one for your side."

Agnes looked as if she was going to cry.

"I would rather not choose if you don't mind," said Frank Morrison, who stood at the head of Isabella's side. "I think Agnes would have given the definition if she had had time."

"Let me see," said the teacher. "Yes, her idea was right as far as it went. You may choose or not, as you like."

Isabella frowned, but Frank did not choose, and the result was his side was beaten, and Agnes was mortified to hear Isabella say that it was all her fault.

And so it happened that they were all on the bridge, and Agnes was shyly keeping close by Frank, and remembering a definition she had once read, though she had forgotten the definition in the lesson. It was this: "A man always wants to win a game; a gentleman always wants to win it fairly."

The view from the bridge was a fine one. The ice came plunging over the dam in great masses, and sent all the water in the little river bubbling and boiling and leaping on every side, and there was such a rush and roar in the ears of the boys and girls that they could hardly hear each other speak.

"Hello, children!" cried the cheerful voice of a passing waggoner; "you'd better get off that bridge; it doesn't look very steady." And his horses trotted on round a crook in the road, and he disappeared.

"I wonder if there is any danger," said Frank, leading the way off the bridge.

Now this bridge was an odd one; it had three parts, perhaps because there were so many rocks in the river there. There was a short span on one side, supported on a little stone pier, then there was a long space which seemed more like a bank of earth than anything, and then a little wooden bridge beyond. The scholars had been standing on the wooden bridge, and they stepped on the bank of earth, all but Jamie, who was leaning on the railing, his sad and usually wandering eyes fixed intently on the dashing spray below the dam.

"Come, Jamie," cried Frank, "you'd better come with us!"

But before he finished the sentence a cry of horror broke from all the children. Without one minute's warning the frail wooden bridge gave way all at once, and in a second more it was swallowed up in the hurrying water, as if there never had been such a thing.

Agnes, who was looking straight at Frank saw that he turned perfectly white, but without an instant's hesitation he

flung off his jacket and dived into the water. Isabella shut her eyes and screamed ; so did some of the others. Agnes stared with a face as white as Frank's. Yes, there was Jamie's head, and there was Frank close behind him. Oh, have they gone under again ? No, there they are. The waters have dashed over them again. Oh, oh, oh, how thankful we ought to be ! They have come up again, and Frank has a firm hold of Jamie. But it was not very easy swimming in that furious water, and Frank caught desperately at a projecting rock.

"Help !" he cried. "I can't hold on long, and I can't swim with him."

The children were too frightened to know what to do. There was no house in sight. Agnes looked round in despair. Then she remembered the waggoner. All this had happened in less than a minute, and perhaps he was not out of reach. She ran along the road he had taken with her utmost speed. Run, Agnes, run, that dreadful water is tearing away at the rock, and Frank is getting exhausted. Round the crook in the road Agnes saw the waggoner slowly ascending a little hill at some distance. Her little feet flew along the ground. She called out, "Stop, stop !" but her voice was faint, and she could not make him hear. Hurry, Agnes, hurry ! Frank's strength is almost gone. The waggoner is almost at the top of the hill, and then his horse will begin to trot again, and there will be no more hope of overtaking him.

Isabella had said that very afternoon that Agnes was a stupid thing ; but however that may be at this moment a bright idea came to her. She had a little rubber ball in her pocket. The scholars had a fashion of playing ball at recess, and Agnes was quite skilful. Aim steadily, Agnes. It is for life or death ! She gathered all her strength, and aimed the ball straight at the waggoner's back. It did not hurt him much, but he looked round with a sudden exclamation, and he saw the girl waving her arms in such distress that he turned his horse and trotted back to her.

"Well, little girl, what now ?" said he.

"They're drowning !" Agnes' white lips could barely form the words, but the waggoner understood her in an instant, and seizing her with one hand he swung her over the wheel to a place beside him, and then drove his horse at a pace that must have astonished that sober animal.

He passed the crook in the road, and saw the boy clinging to the rock.

"Quick, children !" he called. "Shawls, tippets, handkerchiefs, everything ! Tie them together !" And in the meantime he cut the reins, and tied them to the line the children

made. I suppose so many knots were never tied before in five seconds, and then they had a line long enough to reach the rock. The man tied one end round his waist, and telling all the children to hold hard at the other end, plunged into the water. A few strong strokes brought him to the rock. "Give me the boy, and put your hand on my shoulder," said the man to Frank, who, with his eyes rigid and set, seemed not to hear. Frank's hand had stiffened in its hold of Jamie, so that the man had to wrench it off. He placed it himself on his own shoulder, and in five minutes more they were all on shore.

"Wet, isn't it now?" said Jamie, smiling, and staring at his clothes.

It was some time before Frank could speak.

"Well then," said the man rather gruffly, perhaps to hide his feelings, "you've had what they call a hair-breadth escape. Supposing I hadn't been here! You were an idiot yourself not to drop that idiot boy, who's no account to anybody. You *couldn't* save both, but what was the use of both drowning? Tell me that."

"I thought of that," said Frank, rather feebly, "and I kept thinking that when I *couldn't* hold him any longer I'd save myself. But then I kept thinking if he wasn't of much account that his mother thought the world of him, and I *couldn't* let go."

Now this happens to be a true story, and I hope you will agree, as the scholars did, that though Frank did not display any "military skill" he was a very good little "knight-errant."

HARRIET E. PAINE.

Poetry.

A SONG.

Fair art thou, my love, as the jocund morn,
 Sweet art thou, my love, as the tender flower;
 Naught more fair and sweet doth this life adorn
 Than thou, sweet maiden, in thy springtime's hour.
 O thou maiden fair, with thine eyes so rare!
 O thou maiden blithe, with thy form so lithe!
 Thou dost fill my heart with thoughts of days of bliss
 When yet my heart was free and cumberless.

Sweet art thou, my love, as is love itself,
 Sweet as all that man dreams of and adores ;
 More like art thou to some fond imaged elf,
 Than aught we meet on earth's dull, fading shores.
 O thou maiden fair, &c.

Pure art thou, my love, as the crystal dew,
 Pure art thou, my love, as the angels bright ;
 Yet love's nectar doth thy full lips imbue,
 In thine eyes so soft burns love's liquid light.
 O thou maiden fair, &c.

Drear is life's low vale, often lone and sad,
 Full of storms and strife that oft try the soul ;
 Yet the vision fair of thy face so glad
 Spurs the spirit on to its nobler goal.
 O thou maiden fair, &c.

I'll ne'er see thee more : thou art anchored here,
 In haven still, where bark may ride at rest,
 While on stormful seas must I ever steer ;
 Yet thy memory shall light me on my quest.
 O thou maiden fair, &c.

SUMMER-TIME.

O the summer-time, blessed summer-time,
 Full of music like some immortal rhyme !
 O the summer-time, full of peace and joy,
 Like a melody that doth never cloy !

O the summer-time, when the sunshine is,
 And when everywhere are sweet sounds of bliss ;
 When the sky is blue and the earth is green,
 And rapt songs of love fill the space between ;

When the meadows wide on the ambient air
 With huge largess shed their perfume so rare,
 Till the rich grass yields 'fore the scytheman's hand,
 Shedding incense through all the sunny land ;

When the waving corn, yellowing day by day
 'Neath the round of day's fiercely scorching ray,
 Makes the hollow vale and the gentle slope
 Laugh with promise rich, and the toiler hope.

Through the autumn sad and the winter drear ;
 When o'er all the land sounds no note of cheer,
 Goes the toiler forth, tills and turns the soil,
 Then till summer-time waits the fruit of moil :

And when summer comes, and the golden grain,
Like a bridal robe covers hill and plain,
Laughs his heart with joy and with thankfulness
That his toil hath made bloom the wilderness.

O the summer-time, gladsome summer-time !
When the bees hum low in the nect'rous lime,
And the brooklet runs with a murmur sweet
O'er the pebbles white at the willow's feet ;

When we lie and dream half the sunny day,
Catching glimpses of a bright world at play—
Catching glimpses of a bright world afar,
Full of blisses that nought of strife can jar ;

When the woods are green and the fragrant fir
On the perfumed air makes soft music stir,
And the mossy floor in each ride and glade
Is spangled o'er with mesh of sun and shade ;

When the feathery fronds of the brecken wave,
And the foxglove tall, with its bells so brave,
Woos the wand'ring bee by its crimson glow,
While the cushat dove murmurs soft and low :—

Ah, how sweet it is in these hours of calm
Forth to wander slow, drink the permeant balm,
Snatch an hour thus from the world and man,
See the universe on a larger plan !

Then somehow methinks from the grander whole
Compensations flow to the human soul,
And the mean and great in this life of ours
Blend and die like shades in the noon-tide hours :

Then it is we see things in plainer guise,
And the truth stands clear 'fore the cloudless eyes ;
Then around the head of the beggar e'en
And the king alike clings a golden sheen.

In the forest deep, up the mountain hoar,
On the moorland wide, by the voiceful shore,
Or i' th' silent night when athwart the lift
Constellations bright ever glance and drift—

O, if ever man feels the presence near
Of the dimly-known, it is surely here ;
Here His voice is heard, if 'tis heard at all,
Whispering low and sweet to the longing soul—

Whispering comforts dear to the lone and sad,
 Making mournful hearts once more calm and glad,
 Bidding pining ones still to dare be true,
 Bathing loving souls in heaven's strengthening dew !

O the summer-time, gladsome summer-time,
 Foretaste brief but sweet of the brighter clime,
 Where in days to come, free from clog and care,
 Man shall breathe in peace the immortal air,

And shall sing with joy of the days gone by
 When he restless strove for the guerdon high,
 Ever kept in hope by the still-sung rhyme :
 It shall come anon, the glad summer-time !

S.

Correspondence.

PHRENOLOGICAL DELINEATION OF OTTO BRAND.

To the Editor of THE PHRENOLOGICAL MAGAZINE.

SIR,—On the 2nd of May I was summoned to attend the Leeds Assizes as a jurymen. On the 4th, Otto Brand, skipper of the fishing smack *Rising Sun*, was placed at the bar, charged with the murder of the boy Pepper, and during the day it occurred to me that as I had studied phrenology for some sixteen years I might as well take a few notes, believing that the same would be of interest to the readers of the PHRENOLOGICAL MAGAZINE. I noticed the prisoner's head to be small, and of the German type. His temperament was motive-vital. His mouth was small, and the lips tight; his nose small and slightly aquiline; his hair of a light flaxen. The neck was thick, and the head broad between the ears, indicating large Amativeness and Destructiveness. The organs of Conjugality, Friendship, Combativeness, Inhabitiveness, and Approbativeness were all full; Continuity and Firmness very large; Self-esteem appeared small; Veneration full; Benevolence, Imitation, Spirituality, Ideality, Constructiveness, Agreeableness, and Comparison small. Causality and Locality were rather large; Eventuality, or the History-Memory, very small. The perceptive faculties generally were full, but they had a rather arched appearance, as though they had not been much exercised. The eye indicated average Language. The ear was placed about the centre of the head from back to front, but rather low down in the neck, as is usually found in the criminal class.

The prisoner's general appearance was not that of a murderer, and an opinion expressed by several persons was that they were surprised

that so good-looking a man should be accused of so base a crime, and it seems to me that the phrenologist ought to be able to see something more than the general public, and not only to see but to give some account of a brain that could allow a man to be so hard-hearted and brutal. As I have said, he appeared a fair average type of man to the public eye ; but the phrenologist must look below the surface, and in Brand's make-up may be seen a nature that would not be easily moved by feelings of sympathy. His large Firmness and Continuity having been excited by an injured Approbativeness, would prompt that continued system of torture of which we heard so much. His Combateness and large Destructiveness would give that executive and determined will to punish which he exhibited. His small Benevolence would fail to prompt to kindness, while his small Comparison and Human Nature did not enable him to reason as to whether he was not giving too much punishment for slight offences. The propensities and selfish sentiments generally outweighing the intellectual and moral faculties, would allow the passions, revenge and hatred, to reign paramount for a time until more punishment had been inflicted than the youth's strength could bear. But had Brand been asked to commit a murder for a money payment, he would not have accepted the offer (granted, that is, that he had no feeling of revenge against the proposed victim), showing that he would not commit murder for murder's sake. We must also make due allowance for the life that such men lead, which is calculated to blunt their better nature.—Yours, &c.,

JOHN FURNIVELL.

Facts and Gossip.

A MEDICAL gentleman contributes the following :—I venture to suggest a new but simple remedy for want of sleep. Opiates in any form, even the liquor opii sedat and chloroform, will leave traces of their influence the next morning. I therefore prescribe for myself—and have frequently done so for others—onions ; simply common onions, raw ; but Spanish onions, stewed, will do. Everybody knows the taste of onions ; this is due to a peculiar essence of oil contained in this most valuable and healthful root. This oil has, I am sure, highly soporific powers. In my own case they never fail. If I am much pressed with work and feel I shall not sleep, I eat two or three small onions, and the effect is magical. Onions are also excellent things to eat when much exposed to intense cold. Finally, if a person cannot sleep, it is because the blood is in the brain, not in the stomach. The remedy, therefore, is obvious. Call the blood down from the brain to the stomach. This is to be done by eating a biscuit, a hard boiled egg, a bit of bread and cheese, or something. Follow this up with a glass of milk, or even water, and you will fall asleep, and will, we trust, bless the name of the writer.

THE last number of *Unsere Zeit* contains an anecdote which is likely to be made to serve as an illustration of the functions of the brain. An English scholar, whose name we do not know, was spending a holiday in the Hartz Mountains. One day he was travelling from morning till night, making arduous ascents, not only without resting, but even without eating and drinking. At night he was so weary and worn out that he could not recollect a single word of German in which to make his wants known, although at other times he spoke that language with great fluency. Here the memory was so far affected as to lose grasp of one particular portion of its stores, for he could recollect his own native language and all the incidents and sights of the day. As soon as he had thoroughly rested and enjoyed his meal, the whole mass of his German came flooding back into his memory. It has been observed in organic sicknesses of the brain that persons who have known several languages have entirely forgotten one of these languages during the sickness.

“THE Ring of the Nibelung,” an illustrated hand-book to Wagner’s celebrated music-drama, by John P. Jackson, is a work which cannot fail to be of interest, even to those who have no special penchant for the so-called “music of the future.” It gives the story or stories which form the groundwork whereon the famous tetralogy is founded, and is as interesting as a fairy tale. Added to that, it gives snatches of music—the *Leitmotifs*, or guiding themes—from the work, and is besides illustrated with a number of full page pictures. The author, in his preface, says the work was “for the most part written in the form of letters to a newspaper, when the ‘Ring’ was first produced at Bayreuth” in 1876; nevertheless, it displays an insight into Wagner’s method, and an appreciation of his genius rarely vouchsafed to newspaper men. Mr. Jackson has a charming style, and that, together with his evident love of his subject, make him an admirable guide to an understanding and admiration of Wagner’s wonderful creation.

Answers to Correspondents.

ZEAL (Liverpool).—The photograph of Dr. Taylor indicates a man of uncommon intellectual ability, much clearness and depth of mind, and a desire to work for the benefit of mankind both intellectually and morally. The leading feature of his intellect is critical acumen and comprehension. Few men are able to give so clear an exposition of their thought, with so much copiousness of illustration as he can. The moral faculties, however, giving a high religious and spiritual tone to the mind, take the lead in his character. What of self-assertion he has comes from them. He does not possess much self-esteem, and it would be difficult for him to be a vain man. He is good-natured and sympathetic to a fault, but there also appears to be a lack of hope, giving a tendency to melancholy. This is Dr. Taylor’s character in brief; it would take pages to enter into it thoroughly.

THE
Phrenological Magazine.

JULY, 1882.

THE MARQUIS OF HARTINGTON.



GOOD blood and birth go a great way towards making a gentleman. Some are poorly born, with poor blood, and that tainted with disease and wrong bias. Not much can be expected of such a birth, for it will take all of life to live, and with poor advantages and unfavourable surroundings. Some are born with silver spoons in their mouths, are brought up to luxury and idleness, and their only concern is how they can get the most pleasure out of their time and money. They are generally thrown into fashionable society or among the fast and dissipated, and the most they accomplish is to kill time and keep money in circulation. Happy is the man who, born on the high round of the ladder, on the inside track, in a palace where there is abundance of everything to supply all natural wants, and surrounded with favourable stimulus to do his best to have a leading influence among men,—happy is the man who, born with such advantages, does not abuse them. He has fewer impediments in the way of success than the man who is born in poverty and has every obstacle to overcome in order to gratify his strong thirst for learning and position. Those men, however, who work up from the lowly threshold of poverty to a high round in the ladder deserve great praise. Such men are our hard workers and sound thinkers, and they lay good foundations for others. Those, however, who are born with every privilege and means for advancement, and do not abuse those privileges, but start from that standpoint to rise higher, deserve great praise, for the spirit of the age is such as to powerfully tempt a young man in another direction; but to resist all temptations to a fast and fashionable life, and devote himself to study and discipline, shows that the spirit of a man is in him.

The Marquis of Hartington has all the elements of both body and mind to sustain the character of a gentleman. He

is well proportioned in body, with symmetry of form and manly proportion in size. His head is well proportioned to his body, and it is strongly marked in development. He has a predominance of the intellectual and aspiring qualities; he has a long frontal lobe, a high broad forehead, with a strongly-marked perceptive and reflective intellect, which aid him in acquiring knowledge, judging correctly of scientific subjects, of things and their qualities, of circumstances and how to make the most of them, and how to make the most of his situation and experience. He does not let his imagination make too much out of his facts, nor does he lay down a proposition without a good practical foundation to build upon. He will so make use of his experience and knowledge that he will not readily expose himself to criticism, but will be conscious of what he is saying and to whom he says it; hence he will make few mistakes, if any at all. One very strong feature connected with his character and intellectual operations arises from his very large Order, acting with the other intellectual faculties. He works by rule, has plans of operation, is systematic, neat, and particular, and, like Washington, cannot bear to see blotches and scratches, and is never careless in doing things. He possesses great powers of discrimination, is disposed to reason by analogy, is quick to see the bearings of a subject, and very successful in applying a principle and judging of its worth. He is endowed with great powers of intuition, is quick to discern what is true and false, and is a great student of nature. He keeps well posted as to the signs of the times, and is much more disposed to look forward and prepare for what is coming next than he is to look back and glory in the past. All the victories he gains and all the advances he makes are like so many stepping-stones to the summit for which he is aiming, for his very high head—and he is especially high in the crown of the head—indicates aspirations of no ordinary kind. All the superior qualities of his mind appear largely developed, and must have a marked influence on his life and actions. The third story of his brain is so large and high as to be a powerful regulator to his conduct, disposing him to take stock in moral principles sufficient to balance his selfish animal nature. The height of the head above the ears, and in the crown of the head, indicates great decision, determination, perseverance, and settledness of purpose, joined to an unusual amount of manliness, dignity, ambition, and desire to take the responsibilities of his own actions upon himself, and, if necessary, to take the lead and be the master and guiding spirit. His ambition would naturally take intellectual and moral direction, rather than a wordly fashionable one.

His occipital brain indicates a strong domestic cast of mind, although he does not appear to be specially fond of general society ; at least, he has other sources of enjoyment greater than to spend his time in social gatherings for social enjoyment only. His entire organization indicates industry, energy, and even force, if necessary.

Few men are so favourably organized in every respect, and so fairly balanced in every way, or so well qualified by organization to exert a favourable influence, or to command as he is able to, if he uses his abilities to the best advantage.



As a speaker, he would be neither so flashy nor flowery as to destroy the force of his argument, or lead any one to think he was not sincere in what he said ; but he will be characterized more for the thought he utters than for his style of delivery, however good that may be.

If organization is properly appreciated and merit duly rewarded, England will not only be proud of this her son, but give him ample opportunity to use his organizing and governing powers and acquirements to the best advantage.

L. N. F.

THE TWO MRS. GARFIELDS.

Wherever we find a man reaching out to the full measure of his manhood, great all round, one of the world's true kings, we shall find as a rule, with scarcely an exception, that two women have helped him to his crown—a mother and a wife ; a mother always. Grapes of thorns and figs of thistles never was nature's rule. No small-brained, feeble, petty-minded woman ever brought forth a son whose after life did not bear traces of his poverty of birth. No man ever achieved greatness who did not, though orphaned from his cradle, feel the fibre of his mother's nature a strength within his own. And with almost equal force the rule holds good, that a right noble manhood is rarely found apart from the influence and help of a noble wife. Like draws to like unerringly, and needs it for its full development. When a man's life is cramped and stunted on its homeward side, where he has chosen ill or has not cared to choose at all, he may be distinguished in many ways before the world, but his character lacks something to its full completeness. He can hardly be altogether great.

No fine observer can fail to have been struck by the prevalence of these two laws, the first of them especially. Examples meet us on every hand, in the humblest as in the most cultured homes ; but, perhaps, there never was a more signal and impressive instance of their truth than is given us in the life of General Garfield, the late President of the United States. To write his history without writing that of his mother too would be impossible ; and to show him victorious in fight, or moulding a state's decrees, and to leave his home life out of sight, would be to show us but half the man.

"He rose from nothing," is a phrase that has often been applied to him ; and about the least appropriate one that could possibly be chosen. As if any man could be said to rise from nothing with such a parentage as his ; inheriting, as he did at birth, a physical frame sound to the core, a vigorous brain, and a moral nature healthy too : possessions, all of them, of priceless value, folded up within the little frame, like the title-deeds to an estate, worth more to its owner than that of many a duke. For let us note well, it was this balanced fulness in the nature of the child, developing with every breath he drew, which alone made possible the career of the future man. To be cradled in the purple counts for much, no doubt, in estimating the chances of future greatness, if by greatness we understand the amount of work done in and for the world ;

but to be born of a woman like Garfield's mother, and cradled on her knees, counts for more in the making of a man. Inheritance is not of one kind only. The first, and for good or ill the most enduring and important kind, is that threefold heritage of constitution, capacity, and character, received by the child from his parents, and entered on at birth. Next in importance comes that heritage of nurture, by which a man's progenitors still further stamp the impress of themselves on the plastic nature of the child, giving to him that inward having, that possession of himself, his faculties, and powers, which may be termed "personal property" in the strictest sense. Last and lowest in the scale, are those inherited possessions which are merely external to the man, his belongings, not himself; and of these James Garfield had none. He needed none. His magnificent birthright, and the training his mother superadded to it, served him in their stead.

Everyone knows the main outlines of his career. How he was born in a log hut in Ohio; worked with his widowed mother on her little farm; earned enough to give himself a College education; became Principal of the Institute where he had studied as a youth; fought with distinction in the war against the Southern slave states; entered Congress as representative for his native state, Ohio; and, finally, was elected by acclamation President of the Union. His father, Abram Garfield, had died nearly fifty years before this crowning triumph of the son. He was a man of integrity and ability, a pioneer of Ohio, the son of a pioneer, and the descendant of men who in various ways had served their country well. He had bought a little farm of fifty acres in the wilds of Ohio, not long before his death, had partly cleared it, and had put up a log hut for his family; and it was in saving this homestead from a forest fire that he lost his life,—just eighteen months after James was born.

Let us see now what manner of woman she was who gave the future President to his country and the world. Eliza Ballou brought her fortune in herself when she married Abram Garfield. She, too, came of a good stock. Two hundred years back, her Huguenot ancestor had planted the family in the States. He was a clergyman, and there had been clergymen, writers, and distinguished men among the Ballous ever since. They were a large-brained race, of firm and fine fibre, both physically and morally; and they chose wives of like nature with themselves. Eliza Ballou's mother was a woman of a noble type. She was widowed while still in the prime of life; and, casting about for means to keep her family together and maintain them in independence, her active brain struck

out the idea of emigrating to Ohio, the far West of those days, six weeks' journey distant from her home in New York. The woman who could rise above her grief, and for her children's sake could carry out singlehanded and successfully such a scheme, was likely to have a daughter who would make a noble mother too. Perhaps Abram Garfield thought of that when, six years later, he also undertook the journey from New York to Ohio, and settled within reach of the girl whom his heart had fixed on for his wife. Two years later he and Eliza Ballou were married. She was twenty-one then, and twelve years later she was widowed by a sudden stroke.

"I have planted here four saplings in the wilderness," said the dying father to his wife. "I must now leave them to your care."

There is a world of significance in these last words of the Ohio pioneer to the woman whom he was leaving with her children to face the future in the wilderness alone. They shine down to us through the mists of half a century, lighting up the character of the mother and the wife—a wife in whom the heart of her husband might safely trust; a mother whose children would assuredly rise up to bless her. She must have been a woman of large resource, with a heart as brave as it was tender, devoted and courageous too; one who had proved her capacity and power many a time in their twelve years' victorious toil together; above all, she must have been a woman in whom the might of love would conquer self and grief, and nerve her for the soreness of the coming fight. Abram Garfield knew this when he turned his face deathwards with those words of sorrowing trust; and nobly the wife fulfilled his last behest.

Mrs. Garfield buried her husband in the corner of the wheat-field, where the crop that he had sown was ripening already for the sickle, and then turned to face the future for her children and herself. She took council with her neighbours first. There were but three or four of them within a radius of a dozen miles or so. One of them was her brother-in-law, and he advised her to sell her farm, on which some small debt was still remaining; to pay what was owing, and, with the rest of the proceeds, go back with her children to her friends in New York. For, he said, how could a woman, single-handed, till the ground and feed four children and herself?

"And leave my husband there in the corner of the wheat-field?" said Mrs. Garfield. "No! this land that his hands cleared, this house that he built, are to me a sacred trust. I will bring up my children where their father made their home.

Besides," she added, "when I reached New York I should have nothing left in hand ; and I could not endure to live on the charity of my friends."

She took council with herself next, and strengthened her heart by prayer. Her woman's wit served her better than her brother-in-law's advice. It occurred to her that she could pay off the debt by selling a part of the land, and there would be the less then to till. The neighbour had not thought of that, but he helped her to a purchaser. Then she took her eldest boy into her counsels. He was eleven years old, brave-hearted, like his mother, and strong-limbed. With his help she resolved to work the little farm. Together they harvested the crops, cutting the golden ears from beside the father's grave. The boy managed to plough and sow the land for another year, while the mother, with her own hands, split rails to finish fencing in their little wheat-field. It was a man's work, and asked for a man's strength ; but it had to be done, and she did it, cost her what it might in aching limbs and nervous strain. Winter came, and by the light of a pitch-pine fire she spun through the long evenings, and taught her children as she plied her wheel ; for in that sparsely-peopled district there was no school to send them to, and education, in her eyes, was as needful for their future welfare as food for present sustenance. It was a dreary time, though we may well believe that no winter before had ever seemed to wear so slowly and painfully away as did the first winter of her widowhood to the brave but desolate woman.

In the stormy nights, wolves and bears from the outlying forest prowled round the very door of the solitary hut. She made safe her defences, and like some watchful mother-bird brooded over her little ones as they trembled at the baying of the famished beasts. Spring came, the harvest was far off, and the store of grain was running low. She looked steadily ahead, and measured what there was into portions for the months and weeks, scanting herself of one meal a day that the others might continue to have their fill. The harvest lingered. There was hunger now to face, and the brave mother fed her children still, and bore it for herself on a single meal a day ; careful only to hide her own privation from their keen, affectionate eyes. Possibly, a fine pride came here to aid the mother-love, and forbade her to ask charity in her strait from the neighbour whose advice she had declined to take. But with the harvest came relief. It was the first struggle and the last with actual want, and she had the thought, sustaining and consoling her, that she had been true to her husband's trust, and had kept their children and the home together.

There is an air of primeval majesty in the figure of that solitary woman, as we look into the past of nearly fifty years ago, and see her standing there, ruling and serving in that little home. Alone, with only her children round her ; no arm stronger than a boy's to lean upon, and the rude earth—rude, yet not unkindly, for sole minister to her needs. The virgin soil, untouched since creation's dawn by any hand of man, yielded rich return for the tillage it received ; and well it did, or the strength of a woman and a child could scarcely have sufficed to win subsistence from it for them all. But each year the little lad grew bigger, more able to guide the plough and wield the flail ; and then his heart was all his mother's, and love for her gave vigour to his arm.

Like James, he had received from both his parents a splendid physique and a steadfast will, as well as strong affections and a high sense of duty ; but it was the youngest boy who inherited in its fulness the intellect that ran in the blood of the Ballons. It was that royal gift, crowning all the rest, which lifted him at last to the Presidential chair, the ablest man whom the people could find to fill it ; and this gift he derived from his mother. His nature, in countless ways, was the reflex of her own—the same insight into the nature of things, the same ease and directness in dealing with them, so as to make them yield their utmost and their best ; the same magnetic power of subduing those around her, into harmony with herself, or making them see as she did the right thing to do, and then doing it, as though by their own will and not by hers. To be thus endowed is to be marked and fitted by nature for the work of ruling, whether in the household or the nation—that only royal and noble ruling which has for its end to govern that it may serve. It was thus that Mrs. Garfield ruled in her little domain, and it has been said with truth that General Garfield's leadership of the American people was but his mother's faculty "writ large."

There were not many books in that log hut ; but Mrs. Garfield, mindful of her children's future, took care that the few there were should be so read, marked, learned, and inwardly digested, as to be very part and parcel of her children's life. They had Plutarch's Lives among their stock, and out of this book the mother taught her little son till every page shone for him, and so glowed in his imagination that his days in that solitary home seemed passed in the actual companionship of the great of old. She could hardly have chanced on a better primer for the future senator, and her teaching sunk into his heart, and bore its fruit in after years.

But the boy's chief training was out of the Bible, revered in

that household as the Book of God. Before he could speak plainly, his mother had made him familiar with the stories it contained. Her inmost life flowed out through it to him. She taught its lessons to him with her heart and understanding too, and made it for them all a daily and careful study. No home, however rude and scantily provided, can be without the means of culture where the Hebrew Scriptures are thus loved and taught. To know them well is to be familiar with some of the finest poetry in the world; it is to have found fit language in which to express all that is deepest and highest in the human heart; above all, it is to have so looked into the mystery of existence as to understand the awfulness and beauty of the lowliest as of the loftiest life. All this and more the Bible was to Mrs. Garfield. She was a woman who took nothing at second-hand; her religion least of all. The creed she professed was a short and very simple one, adopted deliberately by her husband and herself; but *religion* with her was coextensive with her life. It meant *obedience to the right*, and in this faith she nourished and brought up her son.

Materials are not wanting to illustrate still further the way in which this noble mother moulded on her own the character of her son, but enough has been said to show the bearing of her life upon his subsequent career. What General Garfield was the world knows. It is a point worth considering how far his greatness was the outcome of his own deeds and of the circumstances that called them forth; and how far it was dependent, also, on the birthright and the training that he received from his mother, in that log hut on the little farm in Ohio.

James Garfield was eighteen years of age when he first saw his future wife. Her name was Lucretia Rudolph. She was two years younger than he, a farmer's daughter, and a student in the Geauga Academy, at Chester, in Ohio, where the youth, athirst for knowledge, and bent on obtaining a college education, had put himself to school. She is remembered still as being at that time a quiet, thoughtful girl, of singularly sweet and refined disposition, fond of study and reading, and possessing a warm heart, and a mind capable of steady growth. Three years later, one of those blessed chances that are like the hinge sometimes on which a whole life turns, brought them again together as fellow students, this time at the Hiram Institute, Portage County; for in America the higher education even then was not the sole monopoly of men, but was free to all who had powers to cultivate. The two met more frequently now than they had done before, for Lucretia, in some of her classes, was a pupil of Garfield's, who had crushed

the work of seven years into the last two or three; and each had the opportunity of becoming acquainted with the character of the other. What had been distant admiration in the beginning ripened now into mutual attachment. The young man was poor, and Lucretia knew it. He was paying part of his class fees then by acting as janitor to the Institute, lighting fires, and sweeping the floors of the building, doing the work better, too, than it had ever been done before. A big, shock-headed, rather ungainly young fellow he was; but full of power and purpose, straightforward and sincere, and with a nature as clear and gay as a June morning on the mountains. Like and like had found each other. All that was true and noble in the girl responded to the same in him, and told her that in the poor shock-headed student was a man who would make rich the life of a woman whom he loved. And Garfield himself, who had grown up seeing in his mother the type of all that was sweet and worshipful in woman, knew, too, by the sure instinct of right-headed manhood, that Lucretia Rudolph, if he could win her for his wife, would help him to whatever was best and highest in himself, and would make his dwelling-place a *home*, let their lot be what it might. She was helping him already, if only by the colour and brightness which she brought into his life, and by her ready sympathy, and by the new strength for work that came to him with the thought of her. To a young man like Garfield, a love such as Lucretia Rudolph had wakened in him was at once a safeguard and a stimulus. No low thought could enter while that sacred fire was burning on the altar of his heart; no faculty within him but was quickened to fuller energy by the hope of one day sharing the fruits of his toil with her. Lucretia promised him her hand, and he wrought with more determined will than ever. She had a nature balanced like his own, courageous, far-seeing, and with a reserve of patient power that made her able to sustain herself and him through the long waiting-time that must intervene between her promise and its fulfilment. It was not until seven years after their engagement that James Garfield and she were married. He had been working hard all that time; studying, paying his own way at college, and helping his mother too. Now he had graduated with honour, had been appointed one of the professors in the Institute, with an income sufficient to support a wife, and the two could marry without imprudence. They began life together in a very quiet unpretending fashion. Neither of them cared to make a show before the world, but only to do their work well and faithfully in it. The younger Mrs. Garfield is described to us by those who knew her when

a bride, as being of medium stature, with dark hazel eyes, wavy brown hair, a rounded form, and an expression about her mouth denoting a calm, sweet temper, combined with a steady will. A "comfortable woman," in short; carrying about with her wherever she went an atmosphere of rest and pleasantness; one who married not to be supported by her husband, but to be a helpmate to him. She had been preparing herself during that long seven years' engagement for the place she was to fill, and was well fitted now to sustain with ease and dignity her position as wife to the young professor, and even to aid him in various ways in his academic duties. Her abilities were naturally of a very high order, and they had been sedulously cultivated by her. She was proficient in four languages besides her own; Latin, Greek, German, and French. She was a good mathematician, and was well read also in philosophy and general literature. Like all thoroughly educated women, she was proficient not only in those departments of culture and acquirement which are common to either sex alike, but in those also which are distinctively the province of the woman and the wife. It needs a woman to make a home, and the home which the younger Mrs. Garfield made for her husband was exquisite in every way. As Carlyle said of Dr. Arnold's house at Rugby, after his visit there, it was "a temple of industrious peace;" holy and beautiful as a temple, and full of all sweet and glad activity. The man who is blessed with such a home has ten thousand hindrances removed from his path which others, less happy, must encounter and overcome, if they are to reach the heights they are capable of attaining, either in themselves or in the world without. Whatever worries or difficulties might beset Garfield's outer life, he found only brightness, beauty, and repose awaiting him when he crossed the threshold of his home. The charm of that abode was patent to all who entered it. Guests were always welcome, for the mistress was always prepared for their reception. Her husband and her children were her constant guests, and her table was so perfectly set forth for them, and her domestic appointments so dainty and complete, that the strangers who, in later years especially, were continually being brought to share her hospitable cares, never came amiss, but only added their quota to the general enjoyment. "Garfield is not half known until you see him in his home," people said of him; and that home-half, the best and most human side of the man, was that side of his character which bloomed forth in the atmosphere which his wife now, as in earlier days his mother, created round him.

The Garfields were never rich, nor did they make wealth an object of desire. It was not till nearly twenty years after their marriage that General Garfield had as much in hand as enabled him to carry out his long-cherished wish of possessing a farm and homestead of his own. In 1876 he bought a small estate of 160 acres, with an old farmhouse upon it. A year or two later, being still prosperous in his affairs, he and his wife, for it was mainly her design, enlarged, modernised, and beautified the original building. This was the home at Mentor, for which he pined when lying wounded in the White House at Washington.

There is an exquisite little vignette picture of the younger Mrs. Garfield herself, her work, and the spirit in which she did it, given us in a letter written by her to her husband about ten years after their marriage, a part of which may be quoted here.

"I am glad to tell you," she says, "that out of all the toil and disappointments of the summer just ended, I have risen up to a victory. That silence of thought since you have been away has won for my spirit a triumph. It came to me one morning when I was making bread. I said to myself, here I am compelled by an inevitable necessity to make our own bread this summer. Why not consider it a pleasant occupation, and make it so by trying to see what perfect bread I can make? It seemed like an inspiration, and the whole of life grew brighter. The very sunshine seemed flowing down through my spirit into the loaves, and now I believe our table is furnished with better bread than ever before; and this truth, old as creation, seems just now to have become fully mine—that I need not be the shrinking slave of toil, but its regal master, making whatever I do yield me its best fruits. You have been king of your work so long that, may be, you will laugh at me for having lived so long without my crown; but I am too glad to have found it for even that to disconcert me."

This is the woman whom the English Queen—true woman, too—rose up to honour and console in the day of her sorrow—a sacred sorrow, rich in blessing to the world. Since the death of the Prince of Peace—we speak it reverently—no death, perhaps, has done so much to bring God's gift of Peace to this our earth, making the hearts of millions as that of one man, and drawing the nations in one strong and common bond of brotherhood together as that long, dying and last solemn hour of the martyred President. It was not his exalted station only, nor the fact of his being struck down by an assassin's hand at the very gates of the Senate House that so tightened the cords of sympathy between the hearts of other

nations and his own. It was that in that noble life and patient death men everywhere beheld the type of their own humanity. They loved in him the goodness which they felt was akin to all that was best and deepest in themselves as well; and to love goodness is to be changed by so much into the likeness of it. If, in James Garfield, goodness and greatness grew together into visible beauty before the world, to the mother and the wife let us give their due.

LECTURES ON PHRENOLOGY.

BY DR. SPURZHEIM.

LECTURE XV.

BY degrees you will perceive that the study of phrenology is very extensive; so extensive, indeed, that it embraces the whole range of human knowledge. You have seen, that after having studied certain manifestations of the mind, and after having observed the correspondence between their development, that some application of the knowledge thus derived has been made to the arts. You have seen how opposed phrenology is to the speculative philosophy of the schools, and how deceptive are their opinions, which have regarded the modifications of the mental powers as powers themselves, whereas they are but the modes of action of the fundamental powers. I come to-day to a new sort of consideration.

Many who at first opposed phrenology have, from an examination of its doctrines, become converts to it, and the greatest number of those who at present show an opposition to it, are not correctly informed of its nature or of its objects. I would say to those who suppose phrenology to have a dangerous tendency: Phrenology—is it true, or is it false? If it be not founded in truth, no danger can attend it, because it cannot stand long; and you know that in natural philosophy many truths were, when first promulgated, considered dangerous, and were attempted to be suppressed; the discoveries of Copernicus were for a long time so treated. Whatever is founded in nature, remains; hence we begin by observing in phrenology the fundamental powers, and if the brain be necessary for the manifestations of the mind now, that will remain eternally true. I would say to all those who cry against phrenology, and maintain that it is dangerous, Yes, I admit it, I know no modern doctrine so dangerous as phre-

nology ; but to whom is it dangerous? Do you think that any truth whatever is dangerous to mankind at large? Impossible ! for that would be to accuse the Creator, who is the Author of truth. But to whom is it dangerous? It is dangerous to mere speculative philosophers, for they must either prove that phrenology is unfounded in nature, or they must give up their self-esteem and false systems, and acknowledge that they are ignorant of the human mind. It must modify the opinions hitherto prevalent in society, and this will prove dangerous to mere theorists, who, ignorant of the powers of the human mind, yet exclaim against the dangers of phrenology. But phrenology has been considered dangerous in another point of view, namely, in a moral. It has been urged as an objection to phrenology, that it leads to materialism, to fatalism, and so on. It is very easy to cry, but do those who cry understand the thing they cry against? This is only done by those who have taken a superficial view of the phrenological system.

Hitherto it has been customary to consider the whole brain as necessary to the understanding or intellect, and, consequently, the whole mass of brain, weighing about three pounds, has been required for what has been regarded only as a single power. Now, if a small portion of the brain can be shown only to be necessary to each particular power, and if it can be shown that there are thirty-five powers,* what objection can be made to phrenology on that account? The mind manifests different powers ; but what the mind itself is we do not know. Phrenology cannot teach us what it belongs to the theologian to settle ; we only maintain that the brain is necessary to the manifestations of the mind, not that the brain is the mind, but, I repeat, only that the brain is necessary for its manifestations. This will be sufficient to show that phrenology does not lead to materialism.

I come now to the second objection, which is, that phrenology leads to fatalism. What is meant by fatalism? If it mean that the Creator has dictated many laws to man, to which he must submit, whether he may wish to do so or not, so far we admit fatalism ; but more than this phrenology does not teach. I hope you will distinguish this from other ideas, and it is important you should. Some persons speak of innate ideas and predetermined actions ; such persons do not derive anything from will. Now I do not go so far as this ; I speak only of powers which are given to man, and we cannot create powers ; these powers are submitted to laws, and we cannot

* See foot-note on p. 233 of June No.

change these laws, therefore I maintain that man is submitted to the laws of nature, which are immutable. The laws of nature, I am sorry to say, have been too much overlooked in the study of man, and the greatest mischiefs have resulted from this neglect. The body is governed by laws which man cannot counteract; such are the laws of the senses, of nutrition, circulation, &c. The whole of nature is governed by laws, and what the Creator has dictated, to that man must submit. Some of them may be incomprehensible, but they must be obeyed. An infinite number of things is done against our will. Man cannot be in all cases master of his fate. Can we call ourselves into the world? "To be, or not to be"—is it dependent on our will? We observe that in some families the first-born is better off than those who come after; but does it depend upon our will whether we shall be the first or last? We observe, undoubtedly, that there are hereditary diseases, and we say of such, "take care;" but does it depend upon our will whether we will belong to such families as have hereditary diseases, or to others? Some are born deprived of one or more of the external senses—deaf, blind, and so on; does this depend upon their will, or are they what they are in spite of their will? There are conditions, therefore, to which we must submit.

Phrenology teaches us that persons are born with certain dispositions more or less active, as persons are born with stronger bodies than others. All genius is born, that is acknowledged; education has never produced it, for whatever some persons may do, they will never become possessed of genius; so that we see that some persons have by nature mental powers stronger than others. Several conditions, I grant, are necessary to produce these differences; many causes tend to modify the manifestations, and one of them is the development of the brain, and then there are external circumstances which influence its activity; but these will not explain why some powers should be by nature stronger than others. So far, then, we admit that phrenology leads to fatalism; but if you wish to include in the meaning attached to fatalism the irresistible actions of the powers, then I deny that phrenology teaches fatalism. I am sure that those who assert that it does harm, never reflected upon the subject. There is no connection between phrenology and predeterminate actions, or innate ideas; there is no relation between them; phrenology merely asserts the existence of powers, not their application, since they may be, as I have already shown, infinitely modified. To those who contend for the irresistible actions of the powers, I would say, look at animals, and you will soon see whether

those powers which act with the greatest impetuosity, namely, the passions, cannot be controlled. A dog may be hungry; hunger is a feeling given by nature, and he will try to get something to eat; if he were not free, it would be cruel to punish him for being hungry; but if he should take away that which he ought not, you punish him for it, and another time he would rather remain hungry than be punished by the blows which would follow the seizure of the meat. Do you suppose that the dog must eat because he is hungry, or that he can control his desires? The carnivorous animals are disposed to destroy, but we see those animals are capable of overcoming the destructive propensities. We see every day numerous examples of birds of prey, and animals of prey, being confined with others of a different species in the same cage, so that the natural propensities of animals may be effectually repressed. If the passions can be counteracted in animals, I would ask whether the same cannot be accomplished in man? I would ask any man whether he has not, at some time or other, effectually overcome his natural inclinations, whether he has not restrained certain impulses to action? We all understand that man is furnished with muscles, and that without the exertion of the muscular power he could not go about; without a vocal instrument he could not speak, yet there is no necessity for a man to be always walking, or always talking. Hence phrenology does not teach that the powers act as soon as they are given; and, therefore, it becomes us to consider under what conditions man is free. I shall never speak of an unbounded liberty, because man is subjected to certain laws. There is no effect without a cause, and no legislature has ever admitted of such liberty as some speculative philosophers have supposed. But although I cannot speak of an unbounded liberty, I can speak of a certain liberty to be found in man. If animals can manifest a liberty of action in controlling their passions, surely a greater degree of it must be found in man, who is endowed with such great superiority of intellectual power.

Man, then, to a certain extent is free; and the first condition necessary for the existence of a free will is a plurality of powers. If any being has only one power, he acts in one way, and can have no choice. Thus a stone, subservient to the law of gravitation, must fall; it cannot balance itself in the air, or choose whether it will fall or not. A second condition necessary to have free will, is understanding. No being is free without understanding. Do we not consider that infants are innocent of whatever they do, because they cannot distinguish between good and evil? Idiots may have Destructiveness and

Acquisitiveness very active, and may steal and even destroy, yet we impute no moral guilt to them, because they have not understanding to guide them in their actions. Without understanding no freedom is possible. In common life do we not blame a man who has received education more for any bad action he may commit than a man who has not received education? and this shows that we consider a certain degree of understanding necessary in order to be free.

The last condition on which the state of moral freedom depends, is the influence of the understanding, or the manner in which the powers act. It does not depend upon me to have certain inclinations, but it depends upon me, since I am endowed with understanding, to prevent their actions. We cannot eradicate the inclinations planted in us by nature, but we can exercise a control over them by the understanding, as we do our voluntary motion and the five senses.

I have shown you, in my former lectures, that, being endowed with certain powers, animals acted in a certain manner, and that in proportion to the number of powers they possessed, the greater number of modifications of actions did they present, and the greater influence did they possess over their actions. No animal has so many powers as man; and he, therefore, having a greater number of powers than any animal, and being endowed also with understanding, is enabled to exercise the greatest control over his actions.

We come now to the most difficult point in phrenology. In mankind we speak of the morality of actions, but in animals we never can. What is moral is rather arbitrarily established by legislation. The question is, seeing that there are thirty-five* primitive powers given to act, and destined to act, whether by any system of legislation these powers can be prevented from acting? In my opinion, not; no power can be annihilated any more than a power can be by us created. If laws were made to take away the sight and hearing, do you not suppose that people would still be born with these senses? The laws of nature are immutable, and, consequently, the same in one country as another, but what is considered a great want of morality in England, would be considered differently in Italy or China; however, what is poison in England is not aliment in America.

The principles of optics and music remain the same, although they may not be understood by all persons. To follow up the laws of nature is more difficult than it is to follow certain caprices. These laws must be observed, and if men say they

* See foot-note on p. 233 of June No.

will not submit to them, they will be punished ; take eating and drinking for example ; eat and drink with moderation and you will do well, but exceed this and you will suffer. If you look to the vegetable kingdom, you will observe that certain laws are submitted to ; the laws of gravitation are submitted to, but they are modified by others ; vegetables receive nourishment from surrounding substances, they connect them to their own nature, they grow and they propagate themselves ; the laws of nature and generation are observed, but without any exercise of choice. Animals partake of many of the properties of vegetables ; matter is obedient to gravitation ; the animal structure, composed of matter, is also under the subjection of the laws of nutrition, circulation, respiration, and generation ; but in addition to these, they are furnished with the powers of locomotion, and the senses of sight and taste to discriminate their food. The laws are essentially the same in vegetables as in animals, but they are modified. Man has many powers in common with animals, but he has many powers proper to himself, and he has acquired the mastery over animals. Man is both the master and the head of creation ; has he become so by powers common to himself and animals ? No, but by powers proper to himself. Now if man be thus able to overcome the lower feelings in the animal creation, how much more ought he to become the master over his own feelings ; but, unfortunately, it is too often the contrary ; the feelings, and not reason, govern us, although I hope the time will come when reason will have the entire mastery over the inferior feelings. A mother loves her child whether it is just or unjust ; the other feelings will act—Acquisitiveness, Secretiveness, Destructiveness, and all the lower feelings, and when they have become stronger than they should be, then the interference of legislation becomes necessary in order to control them.

One man looks upon the same object with different feelings to another, and yet no error is more common than that of judging other persons by ourselves. Every individual is apt to make himself the standard of mankind ; but phrenology teaches us the error of such a plan, by showing the nature of the separate powers operative in man. Why should a man who is a mathematician quarrel with another who is not ? or why should a painter quarrel with a musician, or a poet with a mechanic ? Mutual forbearance is necessary to all ; for it is only by practising forbearance that men can live in society. We all differ on some points ; no two characters can be found alike, but we are not on that account to quarrel. So in legislation it is necessary that all the powers should be taken into

account, or the most rigid moral code will be found to fail in its object.

Every power is modified in its action, and, therefore, it is a great point to examine in what manner each power may be modified. Now, the observance of these modifications of the actions of the powers may lead us to the knowledge of the character of individuals, and in my next lecture I shall speak of this as one of the advantages of phrenology, and consider the difficulties which present themselves, and, above all, point out the great error of judging of others by ourselves, and show the importance of attending to the ancient rule, "Judge not, lest you be judged."

PHRENOLOGICAL CHARACTER OF GARIBALDI.

IN 1852, when Garibaldi was living in New York, following the humble calling of a candle maker, Mr. L. N. Fowler had the opportunity of examining the head of the Italian hero who has just passed to his rest. Subsequently, Mazzini read the delineation, and said it was all very true, except that he thought Garibaldi did not possess quite so much Self-esteem as Mr. Fowler gave him. We append the "Character":—

"You have a strong and vigorous constitution; are dense and compact both in your mental and bodily powers. You are well balanced and capable of sustaining yourself where it requires severe mental and physical effort; you require the force of circumstances, however, and special occasions to fully give development to your powers and bring them into the highest degree of action. You have a warm and ardent temperament, joined to a high degree of tenacity of constitution, and great power of endurance. It is seldom we find so much ardour, intensity, and warmth of mind. Your phrenological organization indicates the following conditions:—First, your head is large. Secondly, you have an uncommon amount of brain in the moral region. Your power is chiefly derived from the moral and intellectual brain, rather than from the selfish propensities. Your courage is moral, as well as physical; you are courageous physically, because you are so morally, but modified by Benevolence and Approbativeness.

"You have a strong reasoning intellect, are remarkably clear-headed, original, and qualified to take intellectual views of subjects; you see the most important principle at first, and your mind acts with great vigour in carrying out a plan or

principle. Causality is one of your largest organs. You also have large Comparison, which gives power of discrimination and criticism. You have intuition of mind; you understand human nature well, and very quickly read the mind and motives of others. You have large Order, are methodical, systematic, and careful to lay out your plans well before you execute them. You have immense will-power. The organ of Firmness is developed almost to excess, and you cannot give up when once you have determined upon a course of action. Your Firmness, Conscientiousness, Cautiousness, and Self-esteem combined, give you unusual individuality of character; and you are surrounded by an atmosphere of authority, independence, decision, integrity, and prudence, that readily leads others to lean upon you and allow you to be their guide. You are not so showy, vain, and fond of display, as proud-spirited, manly, dignified, and independent. You cannot cater to public opinion, and act merely to please others. Your sense of liberty is a very prominent feature of character, and whoever attempts to infringe upon your rights and privileges will find in you a stout opponent. You have a fair degree of secretiveness, tact, management, and ability to avoid disclosures, but you are not cunning; will keep your own secrets, yet are not deceptive and untruthful.

“The base of your brain also is large, which gives you an unusual degree of energy, force of character, resolution, and the disposition to overcome obstacles; the greater the difficulty you have to contend with, the more determined and energetic you become; still, Benevolence is decidedly large and exerts considerable influence on your character, rendering you willing to sacrifice much for others. Your social brain is large. You are particularly warm-hearted, cordial, affectionate, and loving. You have the most tender feelings of the husband and parent, joined to the stoutest feelings of the protector and the defender. Few prize their female friends, or could love a wife more devotedly than you. Your love of home is very strong, and you dislike to change from one place to another; if you should travel, it would be more the result of circumstances and of business than from natural inclination.

“You are not copious in the command of Language, and have not a good memory of details and particulars. You are not remarkable for your mechanical powers, but could excel in inventing and in devising ways and means to accomplish your ends.

“To sum up your character in a few words: you have strength of constitution, balance of power, ardour, and intensity of feeling, and a predominance of the higher elements

of character ; you should also be known for your great tenacity of purpose in respect to right and justice ; for self-possession, perseverance, moral courage, fortitude, energy, and executive-ness, and also for a strong, social, loving, and domestic nature. You may show some extremes of character, but have not many faults. There is danger of your being too positive, wilful, and rigid. You would appear to a better advantage with more perceptive power, knowledge of details, memory of common events, and ability to communicate what you know in a more fluent manner. You can engage with success in the management and direction of commercial affairs, in manufacturing, in navigation, engineering, teaching natural philosophy and mathematics, in law, or as a statesman, or soldier ; in any of these you might excel. Benevolence is very large, and, joined to your Approbativeness and Adhesiveness, would lead you to sacrifice more for your friends than anything else."

THE SELFISH PROPENSITIES.

Man is the most perfect animal in existence : he is also the most self-protecting and the most dangerous as an enemy. Most animals are self-protecting, and are armed with some kind of weapon, from the sting of a bee to the strong fore-arms and terrible jaws of the gorilla. All have the means of securing their own living and supplying the wants of their nature, of multiplying their kind, and of protecting their young.

The animal or selfish propensities are located in the middle lobe of the brain, between the ears, and immediately surrounding the medulla oblongata. The heavier, broader, and deeper the base of the brain, the more powerful are the animal propensities. The wilder, savager, and more carnivorous the animal, the broader the head between the ears ; and the tamer, milder, and more herbivorous the animal is, the narrower is it between the ears. There is a great contrast between a tiger and a sheep. All ferocious, hardy, courageous, executive men are broad between the ears ; such are liable to look out for self first and others afterwards, if at all. Such men have great power in overcoming physical obstacles, contending with the elements, and exerting a powerful physical influence.

One of the first of the selfish feelings brought into exercise

after birth is Alimentiveness, situated in front of the top half of the ear, in the middle lobe of the brain, giving, when large, a fulness to that part of the brain ; the function gives sense of hunger and thirst. That portion of the brain located next in front of the ear gives sense of hunger, and stimulates to the securing of food. When men or animals, especially carnivorous animals, are very hungry they are ferocious and dangerous, but when they have filled their stomachs they are quiet and docile. Children and husbands are cross when hungry, but good-natured when fed. The obligation to supply the wants of the body is a powerful stimulant to action, and lays the foundation of industry and civilization. In proportion as this function is properly exercised, and the appetite naturally gratified, is the whole nature in a healthy, prosperous condition. When the appetite is natural, and the food nourishing and adapted to the wants of the body, there is no dyspepsia, no morbidness, nor a tendency to excess of any kind ; hence depraved manifestations are few and more feeble. But in proportion as this function is deranged in its action and perverted in its gratification, is the entire physical and mental organization deranged, diseased, and depraved. When the alimentive desire is morbid and unnatural, the digestive organs are deranged, and the whole system is out of balance. Much of the depravity of man that is attributed to the devil actually comes from a depraved stomach. Man's desire for so much food, and such a great variety of concentrated and highly-seasoned food is the result of an artificial and perverted taste. The more natural, true, and honest a man is, the more simple will his taste be for food.

Sense of thirst is manifested through a portion of brain located in the front part of the organ of Alimentiveness. That these two desires are distinct is self-evident. We many times thirst for water when we have no desire for solid food. Many persons, even with good teeth, prefer to eat with the spoon rather than with the fork. This thirst has a powerful influence on the destiny of man. Not all water is equally good and healthy to drink ; so man, instead of filtering it and making it good, has sought out many inventions, and got up many kinds of drinks, with many ingredients, in order to gratify artificial taste, and excite the appetite. We deceive ourselves when we think we need them, for it is only an artificial taste that requires them. The great demoralizing evils of intemperance of the past and present is based on an artificial and perverted appetite, and thousands upon thousands are continually being ruined simply because they do not eat and drink properly. We need teachers to educate our children

about eating and drinking as much as we need education for them intellectually and morally.

Destructiveness is one of the selfish organs, and is located over and around the opening of the ears, and gives width to the head in that part. The lower the position of the ear the more powerful and purely animal and destructive is the manifestation of this faculty. The function is to give energy, force, executiveness, hardihood, courage, and endurance. The fore part of the organ gives spirit and force in business, a general executive turn of mind, and sustains and carries one through the hardships of life. The back and lower portion of the organ gives the capacity to hate, shed blood, and take life. Without the restraints of the humane faculties it leads to cruelty and wanton destructiveness; when perverted, it gives a disposition to torture, cause unnecessary pain, and take life to gratify the feeling of revenge. Man has been killing his fellow man ever since the human race commenced to exist. Animals kill each other mainly to support life; they are stimulated to do this by the organ of Destructiveness. Children with this faculty large are very active and fond of rough play, and they are noisy, boisterous, and disposed to break, tear, and do mischief generally. They are not to blame for having the faculty, but parents are to blame if they do not know how to regulate its action. Children with Destructiveness large, and badly managed, are liable to be bad tempered and very mischievous and troublesome; for, with this organ large, they must be doing, and knowing parents and teachers will have some executive work for them to do that will occupy their time and energy. Let boys of this class grow up without anything to do, and they will have plenty of wild oats to sow, and generally a large crop of shame and disease, if not a premature death, as the result; while, if the same boys were trained, as children, to use their executive powers in some useful manner, their so-called wild oats could be turned to much better account.

Parents and teachers make a great mistake when they show temper while punishing a child because it is in a temper. Few parents punish their children as my father did his. When he had occasion to whip his children, he used to explain to them the right and the wrong way first; then pray with them, and afterwards whip them with tears in his eyes. Were this faculty cultivated, along with the intellectual and moral faculties, there would not be so many unruly, ungovernable tempers in society. People should be able to govern themselves, although furiously angry.

Destructiveness is a very important power of the human

mind ; no great work is commenced and consummated without this executive element. It enables man to subdue the animal kingdom and keep wild, carnivorous beasts within bounds. Without it, inefficiency is the result.

Combativeness is located at the back of the top of the ear, and gives width and projection at this part of the head. Its function is to give the power of resistance, defence, defiance, and the spirit to overcome and to conquer. Combativeness, acting with the higher faculties, gives moral courage ; acting with the organs in the base of the brain, it gives physical courage. The upper portion of the organ gives the spirit of defence, resistance, and the desire to overcome and be master of the situation. The lower portion of the organ gives the spirit of defiance, and dares opposition, challenges an encounter, and falls back on physical strength to sustain the encounter. The spirit of the faculty is to venture, to make an attempt, to break away from the protection and guidance of others, to give courage, to stand alone and fight the battle of life. When unduly active, it gives a pugnacious, cantankerous, teasing, provoking spirit, such as young lads show when they have nothing to do. When perverted and unrestrained, it gives the disposition to provoke a quarrel and fight, to make difficulty, to create antagonisms, and to go to war. Children having the faculty large need executive play or work in order to gratify and exercise the faculty. To keep a boy with large Combativeness quiet would be as impossible as to keep the grass from growing in a warm sun. It can and should be regulated by action and right guidance ; it only causes mischief to try to check and wholly subdue the faculty. "Nature will out," and so will Combativeness, and the best way to get along with it is to use it to the best advantage.

Combativeness excites combativeness. When parents and teachers antagonize themselves to their children and pupils, then might becomes master ; the one being angry makes the other angry. The child is angry, which excites the anger of the parent, and the child is punished in anger, which only makes the child all the more angry and contrary, until the power of the organ has been expended. If the organ is small it should be cultivated by encouraging children to do courageous things, to protect themselves, and to "fight for their own hands." Various ways can be resorted to in order to take the advantage of circumstances, so as to excite the organ. The best way to regulate its action is to exercise it along with other and higher organs, such as the intellectual and moral organs, in overcoming obstacles in study and self-improvement.

Acquisitiveness gives the desire to acquire property. It is essential to industry, thrift, or the disposition to provide for coming wants. It creates the tendency to trade, buy and sell, and to get what other faculties may desire or need. When the faculty is small, persons are liable to be prodigal in the use of what they have, to live from hand to mouth, and to lay up nothing. If they had property they would not know what to do with it. Some would never get on in the world, however good their chances may be for success, while others succeed with not half the chances. The *what* persons desire to possess as property depends upon the other faculties, and upon circumstances and education. To those who have Acquisitiveness fully developed it is a powerful stimulus to action, and furnishes constant employment. Getting rich or remaining poor does not depend entirely on this faculty ; it is its combination with the other faculties that makes the difference. Many persons make a vast amount of money, yet never get rich or save, while others with a small income eventually become rich.

The financiering talent depends upon several faculties, such as Order, Calculation, Constructiveness, Comparison, Cautiousness, and Conscientiousness ; with Benevolence, Approbation, and Friendship under good control.

The qualities necessary to invest money advantageously are the perceptive faculties, to see the present and prospective condition of things, and correctly anticipate coming wants and demands, and the reasoning faculties to lay good business foundations, and make safe and substantial bargains and arrangements.

This faculty plays a very important part in the affairs of life. A vast percentage of the cultivated human race are struggling and doing their best to accumulate property, and those who have the most, and much more than they can possibly enjoy or use, are yet as anxious to add to their fortune as those who have not the comforts of life. Some accumulate property to gratify their ambition, some to gain power over others, some for pure selfishness, for they will neither spend and enjoy, nor let any one else ; while some make money to do good with and benefit others. The pleasure with some is in making ; in others, it is in keeping ; while in others, it is spending and giving away. While some are very scrupulous to make money honestly, others are equally careless, and are determined to have it at any rate—honestly, if they can conveniently, but dishonestly if they cannot get it in any other way. A vast number of crimes are committed through the irregular and perverted use of this faculty ; courts are main-

tained, lawyers get rich, and prisons are filled with culprits because of its perversion. It is a power of the human mind that should be more distinctly recognized by our systems of education.

We have not, as yet, so perfect a system of education as to recognize all the primitive faculties of the mind, and we do not take into account the fact that to educate one faculty does not educate another, although it may be a next-door neighbour. If one faculty needs training and guiding, in order to render it more useful and perfect in action, each and every one needs the same individual and special training and guiding according to its nature. Our present systems of education are chiefly calculated to cultivate the intellectual faculties, with a more indefinite culture of the other powers of the mind. With this partial education many begin life with what they suppose is a finished education, while some of the faculties have no education at all. A man who had fifty acres of land might as well say that it was all under high cultivation because he had fenced it in, cleared forty acres, put ten of it to pasture, ten to the growing of general crops, ten to fruit-growing, and turned other ten into a flower-garden, while ten remain untouched, except that he gets his firewood and timber from it, and occasionally kills some wild, stray game found upon it. To cultivate one acre of his land does not cultivate another next to it, although it may make it more valuable in the market. So, a man with a part of his mind cultivated is of more value than the one with no cultivation at all; yet he would be more valuable still if he were well and equally cultivated in all his faculties. The perversion of Acquisitiveness leads to great mischief, the most of which might be prevented if it were taken in hand at the proper time and in a right manner. The most correction a child gets for stealing is a whipping, and a threat of one more severe if it is caught at it again. The correction men get for stealing is imprisonment and a ruined reputation. Laws to protect property are very abundant, and penalties are very severe. Why not have education applied to the cultivation of the faculty, so as to prevent the wrong exercise of a faculty which, when perverted, does so much mischief? There is no organ for stealing; it is only when the faculty is unduly excited and not properly controlled by higher faculties that stealing results. The course that is generally pursued to make property safe and secure, is the reverse of what it ought to be. Whips and prisons to punish offenders; police, locks, and bolts to guard and make safe what we have. Threats, punishments and impediments put in the way of obtaining property are only so

many challenges to a daring, depraved man ; while, if his moral sense could be awakened and his mind fortified by a cultivated conscience, property would be much safer than all the machinery of protection. Suspicion creates antagonism, and antagonisms lead to the violation of law. Confidence creates not only confidence, but friendship, and a disposition to protect and save.

Secretiveness gives the power to conceal, and a feeling of reserve. It enables us to keep ourselves to ourselves, to be self-contained, to live within the limits of our own thoughts, to retain our feelings, thoughts, and property. It limits expressions and actions ; it gives the instinct to build high and tight walls, so that others cannot look over or through to see what is inside ; to wear veils ; to talk ambiguously ; to hint at things without saying in so many words what is meant. It whispers, gives knowing winks, nods, and inclines to make secrets of little things.

Secretiveness helps to restrain the full and free action of other faculties, especially Language. It acts powerfully with Acquisitiveness, in aiding to keep and even hide away ; with Cautiousness, to "lay low and keep dark" ; with Approbateness, to make the best possible appearance when desired. The cat has the faculty large, enabling it to deceive the mouse and make it believe there is no cat near. It aids to put on airs and false appearances, and talks lovingly and kindly when evil designs are at the bottom. When Secretiveness is large and unrestrained, it deceives and misrepresents and tells lies. It plays a very prominent part in fashionable life and in business, as well as in politics and diplomacy, by keeping back the truth and making the untrue appear true.

Those who have the charge of children cannot be too careful to secure the proper training and guidance of this faculty. All things should not be made known at all times. It is necessary to be on the reserve at times, and its proper training aids in giving due reticence and guardedness. Children, servants, and others are frequently encouraged to be deceptive by the very way they are treated. Children are frequently deceived, and false answers are given when questions are asked. Servants are the medium of lies for their masters and mistresses ; and when a customer is told a falsehood in a trade he is strongly tempted to do the same in retaliation. The lives of some people are a falsehood, and the professions of many are only a pretence. Hypocrisy is one of the most ungodly of sins, and should be discountenanced everywhere by everybody. Christ was more severe in his denunciation of hypocrites, pretenders, and deceivers than of any other class

of sinners. A man cannot be relied upon when he acts and talks falsely. What children and servants mostly need as aids in the right use of Secretiveness is example.

Cautiousness endows us with a sense of danger and difficulty, giving rise to fear, timidity, hesitancy, irresolution, and restraint. Danger surrounds, and difficulty attends us every moment from the cradle to the grave. There is a necessity for a faculty to make us conscious of this danger and difficulty. To know there is or may be danger is not enough ; we need a faculty to help us to care and provide for the coming emergency, and this Cautiousness does. It is generally large in children, and larger in females than in males. All wild animals are under its influence, and those that are untamable, such as the fox, have it very large. Could we hear it speak, we would hear it say : " Take care ; look ahead ; be sure you are right before you start ; provide for emergencies ; keep your eyes about you ; be on the look-out ; do not trust too easily ; be guarded in the company of strangers," &c.

Cautiousness has a powerful influence over the whole mind, and restrains both speech and action. Where Caution controls thought and courage, the person is unfit to take the lead, or be trusted in the hour of danger. Cautiousness and Conscientiousness large, and Hope and Self-esteem small, makes persons dwell on their imperfections, and see very little chance for eternal salvation ; they are on the anxious seat most of the time, and live unhappy lives, because they see all their faults, and those magnified, and none of their excellencies ; consequently they refuse to be comforted.

When Cautiousness is small, combined with small Conscientiousness and Causality, with large Combateness, Hope, and Self-esteem, the individual is liable to be bold, rash, and like Charles XII., of Sweden, to venture too far, and expose himself too much. Parents are unwise when they govern their children too much by threats, keeping Cautiousness in a constant state of morbid action. Such treatment makes hypocrites, and we have too many cowardly, cringing hypocrites in society for its good.

Approbativeness gives a sense of character, and a desire to secure the approbation of others. It makes one mindful of appearance, and is a powerful stimulus to action ; its manifestations are various, according to how it is acted on by other faculties, and the customs and fashions of society. With some it stimulates to fashion, dress, and display ; others to seek glory on the battle-field. Some are ambitious to excel as students, as musicians, as artists, or as orators. The ambition of some is of a moral and spiritual, while that of others is

altogether of a social character. Sometimes ambition is controlled by the base of the brain making persons seek notoriety in fighting, eating, drinking, and lifting. Some are ambitious to be more rich than their neighbours, and value themselves in proportion to their bank account or landed estates ; others are ambitious to show a beautiful form or face, and take great credit to themselves for having a perfect form, when they have nothing to do with it. The faculty was no doubt given as a stimulus to excel, to make the most of ourselves, to do our best in our calling, and to present ourselves in as acceptable a manner as possible ; it is very liable to perversion, by being turned to unworthy ends. For a young man to be vain of his extensive wealth when his father earned every penny of it, or for a young lady to be vain of her beautiful face, when nature happened to give it to her, is quite uncalled for. But when a man has, like Lincoln or Garfield, worked himself up from a very humble position in life so as to deserve and to secure the highest gifts of his country, or when a man like Howe, the inventor of the sewing machine, or Eads, who made a useless mouth of the Mississippi navigable for the largest ships, or a poor woman, who has been left with a large family of young children, supports them all by her own industry and ingenuity, it is justifiable for them to take credit to themselves.

The faculty is very liable to become morbid, rendering the possessor excessively sensitive to praise or blame ; hence in danger of being very happy or unhappy. It also stimulates to over-action to secure brilliant results ; thus constitutions have been ruined and lives shortened. Where it does not exist, persons care but little for the opinions of others, do not seek praise, and are not specially mindful of appearance or the fashions. They do what they do without much reference to public opinion.

Approbativeness is frequently appealed to, particularly in our schools, and it becomes morbidly active, especially when much is to be gained if successful ; but failure causes many to destroy themselves, and to become insane, because in trying to succeed they so tax their brains as to cause softening of the brain. The most useless and senseless way to gratify the faculty is to try to gain notoriety and attract attention by following the fashions, imagining that there is something great in that.

Praise for well-doing has a more healthy influence, and is more effectual in the end than blame and exposure when persons do wrong. In the one case, spirit is given ; in the other case, spirit is taken out or killed. A certain amount of

ambition and desire to gain the approbation of others is healthy in its influences. Blame is a punishment, but never a stimulus to action. The higher our standard of ambition is, and the more lofty the object we wish to attain, the more character we shall secure.

Self-esteem gives sense of self and of self-importance, and disposes a man to take rank among men; it gives manliness of feeling, and stimulates to nobleness of action; it helps man to individualize himself, and place himself at the head of created things; it aids to give authority and personal influence, and disposes persons to take the lead and assume responsibility. Self-esteem, with Firmness and a fair intellect, gives presence of mind in times of danger, and power to control bodies of men; it is a very important faculty connected with the operations of the mind. Man has an individuality of his own, and he should be conscious of it and act accordingly. So long as he is responsible for his own acts and influence he should so prize himself as to act with reference to the highest motives and results.

Without Self-esteem man lets himself down and connects himself with inferiority; and the man who does not respect himself does not command the respect of others. It is a matter of great importance that young people respect themselves, and keep from forming low associations and habits. No one is improved by having a low, mean opinion of himself. Self-condemnation is not a healthy stimulus to noble actions. If a man is conscious that he is a sinner let him confess and place himself at the feet of justice, and deliver himself up, and make the best of his condition, and not spend the remainder of his days in letting his sins make him wretched and useless.

Self-esteem has a healthy influence on the whole mind. A due degree of it aids to resist foreign influences and brace a man up against his foes.

The upper portion of the organ gives dignity and consciousness of one's own importance; the lower portion gives sense of independence and personal freedom. Many have the one portion without the other.

Uncultivated Self-esteem, with not enough sense to balance it, makes a very unpleasant companion or a favourite in office.

Firmness gives stability, perseverance, and permanency of feeling. It helps one to maintain his position, to hold on to his decision, and to carry out his purposes and plans. Persons with this organ are more reliable than those without it. It appears to hold the balance of power, and aids to regulate the

action of the other faculties, and, as it were, makes the other faculties stick to their mark until the task is completed.

Conscientiousness and Cautiousness, acting in harmony with Firmness, give circumspection, consistency, and uniformity of conduct. Firmness with the intellect aids the student and the inventor; in fact, if a person is without Firmness he is like a lot of sticks not tied together; he is a bundle of impulses and is subject to varied and contradictory extremes. Too much of it makes a person too tenacious, unreasonably firm, if not stubborn and obstinate.

Firmness is of great assistance in the exercise of the will, which comes from the united action of the different faculties of the mind. When there is an evenly-developed brain, a highly cultivated mind, and large Firmness, there will be a strong will and tenacity of mind, especially if the osseous system be strongly represented. The cultivation of Firmness is a matter of great importance. Children should be taught to decide with care what to do, and, having decided, to carry out their decision to the ultimate.

L. N. F.

MEMORY IN ANTS.

The general fact that whenever an ant finds her way to a store of food or larvæ she will return to it again and again, in a more or less direct line from her nest, constitutes ample proof that the ant remembers her way to the store of food. It is of interest to note that the nature of this insect-memory appears to be identical with that of memory in general. Thus, a new fact becomes impressed upon ant-memory by repetition, and the impression is liable to become effaced by lapse of time.

Sir John Lubbock found it necessary to teach the insects, by a repetition of several lessons, their way to treasure, if that way were long or unusual. With regard to the duration of memory in ants, it does not appear that any direct experiments have been made, but the following observation by Mr. Belt on its apparent duration in the leaf-cutting ant may be here stated. Some years ago he found his garden invaded by these ants, and on following up their paths he found their nest about a hundred yards distant. He poured down their burrows a pint of diluted carbolic acid. The marauding parties were at once drawn off from the garden to meet the danger at home, while in the burrows themselves the greatest

confusion prevailed. Next day he found the ants busily engaged in bringing up the ant-food from the old burrows, and carrying it to newly-formed ones a few yards distant.

These, however, turned out to be intended only as temporary repositories, for in a few days both old and new burrows were entirely deserted, so that he supposed all the ants to have died. Subsequently, however, he found that they had migrated to a new site, about two hundred yards from the old one, and there established themselves in a new nest. Twelve months later the ants again invaded his garden, and again he treated them to a strong dose of carbolic acid. The ants, as on the previous occasion, were at once withdrawn from his garden, and two days afterwards he found "all the survivors at work on one track that led directly to the old nest of the year before, where they were busily employed in making new excavations. . . . It was a wholesale and entire migration." Mr. Belt adds: "I do not doubt that some of the leading minds in this formicarium recollected the nest of the year before, and directed the migration to it."

Of course, it is possible that the leaders of the migration may have simply stumbled on the old burrows by accident, and, finding them already prepared as a nest, forthwith proceeded to transfer the food and larvæ; but as the old and the new burrows were separated from one another by so considerable a distance, this supposition does not seem probable, and the only other one open is that the ants remembered their former home for a period of twelve months. This supposition is rendered the more probable from a somewhat analogous case recorded by Karl Vogt, in his *Lectures on Useful and Harmless Animals*. For several successive years ants from a certain nest used to go through certain inhabited streets to a chemist's shop, 2,000 yards distant, in order to obtain access to a vessel filled with syrup. As it cannot be supposed that this vessel was found in successive working seasons by as many successive accidents, it can only be concluded that the ants remembered the syrup store from season to season.

LET the fruition of things bless the possession of them, and think it more satisfaction to live richly than to die rich. For since thy good works, not thy goods, will follow thee, since wealth is an appurtenance of life, and no dead man is rich, to famish in plenty and live poorly to die rich were multiplying improvement in madness, and use upon use in folly.—*Sir Thos. Brown.*

PEACOCK FEATHERS.

CHAPTER I.

THE girls called her Cecil Canary, because she sang so sweetly ; but her real name was Cecil Anna Carey. If she had had as many names as a princess, her mother would have called her by them all when she meant to be impressive.

"Now, Cecil Anna Carey," she said, one morning, "you are not to get into any mischief while I am gone."

"No, ma'am," said Cecil, hiding her dimples by puckering up her lips as if about to whistle.

"I don't know how long I shall be gone. It depends on the state of your grandmother's health. But I hope to find everything just as I left it. Do try, my child, to see how well you can behave."

"Mother," cried Cecil, roguishly, "for a year past, every time that I have seen a spotted horse or a shooting-star, I have wished to be a good girl."

"Child, you turn everything into a joke."

"Well, I *do* frivel a good deal," owned Miss Cecil ; "but really, mammy, I'll do my best. Don't worry about me. I don't believe that I shall smash or upset things any more than when you are at home."

"Cold comfort that !" said the mother, laughing in spite of herself.

The Carey family consisted of Mr. and Mrs. Carey and their one daughter Cecil. She was a host in herself—a fun-loving girl of fifteen, with spirit and vitality enough to go round a baker's dozen of children. Mr. Carey was a stern man, of whom Cecil was not a little in awe ; but he was so absent-minded, so absorbed in his business, and so much away from home, that he was hardly a restraint on Cecil's mischief. Mrs. Carey must go, however ; her mother was ill, and needed her care. She resigned herself in advance to molasses candy every day, and tidies stuck like envelope flaps to the chair backs ; to the friendly attentions of Cecil's school friends, who would dance holes in the parlour carpet, and pluck the buds before they were roses ; to dresses torn beyond mending ; and to the cat making a nest in her work-basket. But there was one thing she had not anticipated, and that was the thing which came to pass.

It was scarcely a week after the mother left, that Cecil and half-a-dozen of her friends were holding what they called a

‘Cronies’ Confab” in the Carey drawing-room, Lou Witherington had the floor. Lou was a rival of Cecil’s in restlessness, and almost ahead of her in planning things to vent the energies of their lively young set. She was in high feather to-day, having new projects under way.

“Girls,” she said, “it was the *most fortunate thing* that I had to *rush off* that afternoon to see if our washer-woman could *do up my white organdy* for Sunday. Next door to her I found *an appalling case of destitution*.”

By all the girls Lou was thought to use language as brilliantly as a juggler tosses balls. Somehow, her talk was like her piano-playing—the italics of the one answering for the loud pedal of the other.

“There was a poor woman,” continued Lou, “and *children thick as weeds*, with uncombed locks—”

“Why didn’t they comb them?” asked Sally Catterson.

“Why, Sally,” cried a more sympathetic listener, “of course, because they had no combs.”

“Then they might have tied them back with ribbons,” murmured Sally, in the spirit of Marie Antoinette. “Why don’t they eat cake?” said that queen, when told that her people starved for bread.

“*Ribbons!*” exclaimed Lou; “why, they hadn’t a shoe to their feet, nor a stocking; *and nothing in the house to eat except cold bread*.”

Murmurs were loud. The climax was too pitiful.

I saw *that something must be done*; my duty as a confirmed girl required it. But *what?*—that was the rub. Suddenly *tableaux* seemed to rise before me. Mamma said that we might have them in her parlours, and they will hold fifty people, and we’ll have printed tickets—fifty-cent tickets.”

“But *who will buy them?*” cried Sally, with a gasp.

“*Everybody!* especially the *boys*; because, you see, we are not going to let the boys take part.”

“Oh! it’s to be a girls, affair entirely?” said Ella Gibson, with a slight contempt in her tone.

“*Entirely!* Boys are so rough and *gibing*.”

“I don’t know how we can do without them in some scenes,” said Cecil Carey. “The ‘Choice of Paris,’ for instance—how can we have Paris without a boy?”

“Lonny will be Paris.”

“Lonny! your little brother! why, he isn’t ten years old.”

“Don’t look so contemptuous, Cecil. I’ve a brilliant idea. That boy has a perfect *genius* for *walking on stilts*, and I see *no reason* why we shouldn’t put him *on stilts*, and then dress him as Paris.”

"Are you in earnest?" said Cecil, in a dreadful voice.

"*I am.*"

"It will be perfectly ridiculous."

"It won't be any such thing. And whose tableaux are these, anyhow?"

Lou was getting angry, and Cecil shrugged her shoulders, with nothing more to say.

All the long hours of that afternoon the Cronies' Confab discussed scenes, dresses, pictures, and poems, with as much enthusiasm as if they had had a patent on that quality.

"The 'Choice of Paris,'" said Lou, "*will be one of our prettiest scenes.* I shall be Minerva, with an owl; and Ella shall be Venus, because she has such long yellow hair. Cecil is to be Juno. You must have a peacock, you know, Cecil."

"*A peacock!*"

"Certainly; Juno always had one. It was her emblem, or attendant, or something. You'll be *nothing* without a peacock, Cecil Canary."

Cecil's face fell; she almost felt like crying.

"I tell you what," said Sally Catterson, good-naturedly, "you might trim your dress with peacock feathers; that would do just as well."

"Feathers are as impossible to me as a whole peacock," said Cecil mournfully.

It was Lou's turn to be contemptuous. "If you don't have *something* peacocky," she cried, "you'll be about as much like Juno as like a *cat*. Cecil Carey in her old white muslin, that's all!"

Cecil was cut to the soul. She could hardly hold up her head. Life would not be worth having unless she could appear as a Juno should. After the girls left, the subject preyed on her to such an extent as almost to take away her appetite for supper. Nothing prevented her having a sleepless night—but that she happened to get sleepy at nine o'clock, and going to bed, happened not to wake until sunrise. But her grievance woke with her.

"There's nothing of a peacock about this house," she thought, as she dejectedly plaited her hair. "I might stand holding that, and brush the flies off the other goddesses."

As she laughed, a wicked little elf of an idea popped into her head. She hurried through her breakfast, and was first in the dining-room; but she was as abstracted through that meal as her father himself. From time to time her blue eyes twinkled toward a corner where something white and sepulchral stood in dignity. This was the feather fly-brush. It was a gorgeous affair. It was not for every-day use by any means. Fresh-

cut mulberry leaves were good enough for ordinary occasions ; but when Sundays or the minister came, or ladies dropped in to tea, or Cecil had a birthday party, out came its purple glories from their linen shroud. Little Jack waved it over the minister, or the ladies, or the birthday party, with as consequential an air as if he had been the peacock to which it had originally belonged, for even he knew it was the pride of Mrs. Carey's heart. Cecil knew it only too well, and yet it was upon *this* that she proposed to lay sacrilegious hands—as if it had been no more than a bunch of roosters' feathers !

Think of it, children ! Dosen't it make your very blood run cold ?

CHAPTER II.

Now, Cecil Canary, with her sweet voice and her yellow hair and her bright blue eyes, was not a naughty girl ; that is, on the whole, she was not. There were times, indeed—well, times when Cecil would have her wilful way, nor count the cost. She had a habit of shutting her eyes and shooting, so to speak ; of doing a thing, and looking at consequences afterwards. Never was temptation more powerful than now. She took the brush to her room, unswathed it from its linen cover, gazed on its purple glories, and felt herself the goddess Juno. Who would dare to criticise with those peacock eyes flashing all about her ?

She hardly deliberated before she was lost. She seized her scissors, clipped the thread that bound the shining feathers, and went to work like a young fury. She was skilful with her needle, this rash Cecil, and when her Juno dress was completed, Worth himself could not have felt more satisfaction in a masterpiece.

For a fortnight never were girls busier than all the little maids. There were meetings and discussions without end. There were quarrels even ; and sometimes I fear that the lever which had originally moved this small world was forgotten. To provide stockings and hair-ribbons for destitute children became less of an object than to shine in mimic glories before the eyes of a giggling audience.

The great night came. Mothers, big brothers, and friends had smiled and bought tickets. A paying crowd assembled. Actually the editor of the *Southern Trumpet* had refused to be a deadhead, and had paid his fifty cents like a little man.

Every scene was vigorously applauded. The "Choice of Paris" seemed only to gain added lustre from the fact that the sweet shepherd of Mount Ida towered to a preternatural

height (on stilts), whilst the blushing face of a small boy beamed above the majestic figure. Ella Gibson made a soft, delightful Venus, in a long white muslin and a wreath of roses. Lou Witherington looked very wise as Minerva, in a steel-coloured poplin, with a stuffed owl perched on her shoulder. But the honours of the scene belonged to Juno—sweet Cecil Canary. Juno, indeed, would have opened her ox-like eyes at such a representation of her classic charms, but the costume was highly satisfactory to the one that wore it. The dress was short and fluffy. A row of shining peacock eyes encircled the skirt. A bunch of long feathers was slung like Diana's arrows across her back, and a saucy little top-knot danced over our Cecil's forehead. Even Minerva was silenced by these glories. Cecil, who wore the costume for the last half of the evening, felt herself on a pinnacle. Such compliments as she had! Three of the biggest boys said that they wished *they* had stood in the place of that grinning little Jackanapes, Lonny Witherington, and they'd have rolled the golden apple over to Juno in double-quick time. Dear me! our Juno's head was quite turned. She laughed, danced, chattered like a magpie, and felt that innocent glory in being alive which is about the pleasantest feeling we mortals ever know in this vale of tears. Her father called for her at twelve (he had not attended the tableaux), and she went home in a quiver of excitement, too tired to say her prayers or think of her sins.

But next morning came, and Cecil began to look at the consequences she had refused to count. There lay the peacock dress—a rumpled piece of finery, its shining eyes broken and torn. In one corner stood the denuded feather brush—a reproachful long white stick. Her pale face confronted her in the glass as she cried, “What shall I do?”

She tried for a while to restore the brush to its old beauty, but she could not make the long feathers stick, much less do anything with the short ones. Her face had just begun to pucker as if she were trying to keep back the tears, when Aunt Clarissa's black head poked itself into the room.

Aunt Clarissa was the cook. Cecil had taken her into her confidence at the last moment, and when she saw the mournful young lady, amid the ruined feathers, she essayed to comfort her.

“Honey,” she said, “did you ever hear tell of Aunt Sinii?”

“Never.”

“I reckon she's heerd of you. Dar ain't nothin' old Sinii don't know.”

“Is she a witch?” asked Cecil, languidly.

“She's *jest dat*. An' she's got de evil-eye. Tell you, she's done harm enough in de county. But dat ain't de p'int.”

"What *is* the point?" said the dismal Cecil.

"Why, honey, she keeps pea-fowls."

"Oh!" cried Cecil, with a long breath.

"Yes, Cecy, an' makes feather brushes, de prettiest sort, fur de quality. An' ef I was you, I'd go right to her, an' mebbe she kin make dat brush o' your ma's jest as good as new."

"*Won't* I, though?" said Cecil, jumping to her feet. "Where does she live?"

"'Long de bank o' Big Muddy Creek. It's a right smart walk o' three miles. But, lor! your legs is young," cried Aunt Clarissa, with a ponderous sigh.

Cecil put on her oldest, shortest dress, and as soon as breakfast was over, out she started to find Aunt Sinii. She took with her the fly-brush stick and all that was left of the feathers.

It was a lonely walk through the woods. Now and then a tear tumbled over Cecil's cheek as big as a hickory-nut dropping from a tree. Her burden—that bare stick—grew heavier each moment. I'm afraid a sense of guilt weighed it down. It was a cloudy morning, and the woods were wet. How unlike Juno she felt, as she pushed aside brambles, and stepped over puddles, and made a path for herself through winding ways!

It was noon before the smoke from a tiny mud chimney told her that Aunt Sinii's home was near. It was a little log cabin, with a zigzag fence around it, a pig-pen near the gate, and in the yard—Cecil's heart jumped—two splendid peacocks, their tails outspread, and shining like the throne in an Indian mosque. They shrieked discordantly, but music could have been no sweeter to Cecil Canary.

Aunt Sinii sat spinning in the doorway. She was little, and black, and long-armed. She reminded Cecil of a spider in her web, as she sat there and peered from behind her wheel. Poor Juno nodded diffidently.

"Are you Aunt Sinii Hubbard?" she said, with her most polite air.

"Who else 'd I be? An' you's Cecil Carey; I've seed you wid yo' ma. What you want wid Sinii?"

"I am in trouble, and I was told that you could help me."

"In trouble? Lor! honey, come in an' set down. Now you tell me all about it."

Cecil did not need much encouragement to pour forth the whole story.

"Chillern is de very limbs o' Satan," moralized Aunt Sinii. "On'y think o' yo' playin' yo' po' absen' ma sech a trick! An' she a-settin' de whole universe by dat peacock brush o' hern!"

As Aunt Sinii was a witch, Cecil was not surprised at her

knowing this, but she was discouraged at the sharp glances from over the rim of the spinning-wheel.

"I shall be in an awful trouble when she gets home," she remarked, despondently.

"Reckon a little whippin' wouldn't do you a *mite* o' harm;" and she *thought* Aunt Sinii chuckled.

"A *whipping*, indeed! Hold your tongue, if you please. I will go home, and stand whatever comes."

"Sakes alive! honey, don't be so snaptious. I ain't said I *wouldn't* help you. I *kin*, jest 's well 's not."

"Oh, thank you—thank you a million times."

"Thanks is dry as bones in de sun," said Aunt Sinii. "Got nothin' else fur me?"

"I haven't any money," said Cecil, wondering if it would do to get up another entertainment for her own benefit.

"Got nothin' o' value?"

Cecil knitted her brow in thought. "I have my grandmother's gold beads," she said at last; "they are worth forty brushes."

"Dey will do; I'll take 'em," said Aunt Sinii, generously.

"I'll tell you what I *will* do," cried Cecil; "I'll let you keep them until I can pay you for the brush."

"I kin make you a brush," said Aunt Sinii, "as gorgeous as de risin' sun."

"And will you do it—will you?" cried Cecil, her blue eyes sparkling.

"I'd as lieve as not—fur ten dollars."

Cecil uttered a little cry of amazement.

An' I'll take de beads—I've seed 'em; I knows dey is solid—till you's ready to gimme de money. Den I hands 'em back."

Ten dollars was an awful sum; but here was a present relief, and Cecil closed with her offer.

"When can you let me have it?"

"In a couple o' days, chile."

The sun had come out as she started home, and her heart was light.

Next morning she took the same road again to deliver the beads to Aunt Sinii. They were beautiful, those round golden globes, and Cecil felt a pang as she saw them slipping through the "witch's" lean, withered fingers.

"All right," said Aunt Sinii. "You know whar dey is; I'll put 'em back in yo' han's when you gives me over ten dollars."

"Ten dollars!" thought the little maid. "*Ten roc's eggs!* Where will I ever find so much money?"

(*To be continued.*)

Poetry.

L'AMOUR.

We sat upon a grassy mound,
Beneath an ancient cross of stone ;
We listened to the billows' sound,
As far below they played around
The jagged rocks with lisp and moan.

We wandered thro' the ruins gray—
The ruins silent, weird, and old—
Until the sinking round of day
Had bathed the ever-restless bay
In streams of dazzling, molten gold.

We prated of the deeds of fame
That legend wedded to the place,
Until we chanced upon the name
Of a fair, ill-fated dame—
They called her Margaret Grace de Grace.

This maiden loved, the legend says,
A knight without or fear or blame,
Save that his sire's long Border frays
Had left him poor ; which in those days
Was graver fault than evil fame.

Their tale is short : she loved with love
As pure as angel heart could feel ;
Was loved ; and each in silence wove
Such dreams of bliss as but above
Rewards the constant, brave, and leal.

Her kinsmen marked their love, and swore
He ne'er should wed a Grace de Grace :
They vowed eternal love ; then o'er
The sea he passed to foreign war,
And died before an unknown place.

Long time she waited, hoping e'er
That he'd return she loved so well ;
But hope at length being dead, she bare
Her sorrow with a queenly air,
And aged died in cloister's cell.

We prated thus—my love and I—
Of these sad lovers long ago,
Until the shades of night were nigh,
And in the purple western sky
One star of liquid splendour shone.

My darling stood beneath the rood,
She gazed upon the evening star—
Her pale, fair face and form imbued
With glory from the dying flood
Of light that flushed the West afar.

I could not look upon that beam :
I sat and gazed upon her face,
As fair and lovely as a dream
That comes in sleep, and which we deem
Not of the earth—so sweet its grace !

A dimness started to mine eyes,
A prayer arose within my breast—
That heaven might grant me such a prize
As this knight's love, so I might rise
Above all lowly mundane quest.

She, turning, saw my tears, and read
The thoughts that filled me with unrest ;
She stood a moment, then she fled
Into my arms and laid her head
Upon my wildly-beating breast,

And whispered, her dear eyes aflame
With love, that she'd be true to me
As to her knight the high-born dame—
In life and death, in fame or shame,
My own true love she still would be.

I clasped her to my bosom ; long
We rested, folded heart to heart
And cheek to cheek ; then 'mid the throng
We passed, with courage calm and strong,
Knowing that life had now no smart.

C. NORTH.

BLESS me in this life with but peace of my conscience, command of my affections, the love of Thyself and of mankind, and I shall be happy. I envy no man that knows more than myself, but pity them that know less.—*Sir Thos. Brown.*

Facts and Gossip.

WE have received a copy of the first volume of a "History of Woman Suffrage," edited by Elizabeth Cady Stanton, Susan B. Anthony, and Matilda Joslyn Gage, and illustrated with a number of fine portraits of eminent women, on steel. The question of woman suffrage, the rights and status of woman, has already become one of the vital political issues of the day ; it is forcing itself to the front, bound to be heard, and is certain to increase in interest and importance constantly. Therefore, its relation to political, social, and religious questions should be thoroughly understood. The work is not a mere collection of dates and documents, but contains interesting extracts from the debates of distinguished men and women of our times, with sketches of their lives and characters, enlivened by interesting anecdotes and reminiscences, together with letters from Horace Greeley, George William Curtis, Harriet Martineau, John Stuart Mill, Jeannie Deroine, Pauline Roland, Samuel J. May, William Henry Channing, Samuel Johnson, Wendell Phillips, Gerrit Smith, Theodore Parker, Thomas Wentworth Higginson, and others, placing on record much that would be otherwise lost or forgotten. The work, when completed, will be a valuable compendium of the movement for the emancipation of women.

THE following striking instance of intelligence in a dog is given by Dr. F. L. Bardeen, in the *Scientific American* :—"While at the University, taking my medical course, the facts I relate took place. Among other appurtenances to the department of physiological chemistry was a dog with a gastric fistula, which fistula was properly healed around a silver tube, having an internal and external flange to keep it in place. The tube was stopped by a closely-fitted cork, except at such times as we needed a supply of gastric juice. The fistula caused the animal no disturbance whatever. He was well and hearty, was fed at and made his home at the medical department. During the summer vacation, however, when the University was closed, he was transferred to the care of the surgeon, who took him to his house. During his frolics, one day, he jumped over a fence, striking it, and dislodged the cork in the tube. Ponto soon noticed that his food did not seem to satisfy him, and that all he drank ran out of his stomach on the ground. His master having gone away for several days—fishing—he must needs take care of himself ; so immediately on eating or drinking anything, he ran to his bed in the carriage-house close by, turned on his back, and remained so for an hour or more, or until he felt satisfied that it would do for him to get up. Coaxing, threatening, and kicking by the domestics about

the house, or by those whose attention was called to his actions, were alike unavailing to drive him from his place or from his supine position. Finally, some one who knew for what purposes the dog was used, examined his fistula and found the cork gone. This being restored, he was soon persuaded to go about as usual, and indicated by his actions that he understood that everything was all right. This incident can be vouched for by many reliable persons. Who will say that dogs—at least one dog—cannot reason?

A CORRESPONDENT asks us what are the advantages of studying Mesmerism “in connexion with Phrenology.” It is difficult to say whether there is any advantage at all in the connexion. Whether there is anything in the theory of phreno-mesmerism we are not open to say. The study of mesmerism, or animal magnetism, is interesting in itself, and it may be found to have some bearings on phrenology, but we do not advise any one to mix the two things together.

IN a few days will be published (at the office of this publication) an interesting little work on Physiognomy, entitled “The Mind in the Face.” It is by Mr. W. McDowall, of Dumfries, and will prove a valuable addition to the study of physiognomy.

WE have been asked by several readers of the MAGAZINE to give a phrenological description of “General” Booth, the organizer and head of the Salvation Army. We may say for their satisfaction that we purpose giving a delineation of that gentleman shortly.

THERE has been such a large demand for the “Character” and biographical sketch of Mr. Bradlaugh, which appeared in our last number, that it has been found necessary to republish it in the form of a pamphlet, which may be had for a penny.

IT may be new and interesting to some of our readers to learn what value the Rev. Henry Ward Beecher places upon phrenology. “If a man,” he says, “wishes to know practically what he is made up of, if a man wishes a knowledge of human nature for definite practical purposes, there is no system which will aid him in acquiring that knowledge like the system of phrenology; not interpreted too narrowly or technically, but in its relations to physiology and the structure of the whole body. And I may say here, what I have never said before in the pulpit, that the views of the human mind, as they are revealed by phrenology, are those which have underlaid my whole ministry; and if I have had any success in bringing the truths of the Gospel to bear practically upon the minds of men, any

success in the vigorous application of truths to the wants of the human soul, where they are most needed, I owe it to the clearness which I have gained from this science. And I could not ask for the members of my family, or of the church, any better preparation for religious indoctrination, than to put them in possession of such a practical knowledge of the human soul as is given by phrenology."

SUMMER.

I sing of the golden days,
The beauties and joys of summer,
When blue is the sky, and gay
The hills with the purple heather.

Behold how the rosy morn
Kindles the east with blushes,
While the gentle zephyr plays
With the feathered heads of the rushes.

The last pale star forlorn
Has waned its night-long splendour,
While all things to their God
Their grateful praises render.

I sing of the great, good Giver
That gives us the summer and song ;
That gives us all beauty and goodness,
And makes us live happy and long.

Oh, sing with me, flowers of the meadows !
Oh, sing with me, birds of the air !
Oh, joy with me every creature
That shares in these bounties so rare !

T.

Answers to Correspondents.

J. G. (Queenstown, South Africa).—Yes ; we shall be glad of articles on any of the native races. Much has been written about them, but very little from a phrenological point of view.

SUBSCRIBER (Christchurch, New Zealand) writes asking us to "give a phrenological description of a gentleman of the name of Mr. Darby, founder of a religious body called "Brethren," or "Plymouth Brethren." We should be willing to comply with "Subscriber's" wish, if he or some one else would send us a portrait of the gentleman in question. Mr. Darby died recently, but, so far as we know, no portrait has been published of him.

THE
Phrenological Magazine.

AUGUST, 1882.

LORENZO N. FOWLER.



ON the 21st of June, Mr. Fowler left England for a short visit to the United States. During his absence we take the opportunity of publishing a delineation of his character, together with a short sketch of his life and labours. As no one on the staff of the PHRENOLOGICAL MAGAZINE, however, has felt equal to the task of writing the delineation, we have been compelled to take that and the accompanying biographical sketch from the *American Phrenological Journal*. The accompanying portrait was engraved from a photograph taken in the Spring of the present year, and is absolutely the best likeness of him ever published.

Originally the temperament of this gentleman was predominantly Sanguine—to use the old term—and expressive of a predominance of the thoracic or chest region of the body. When he was twenty-one years of age he had broad shoulders, a deep chest, was small at the waist, and gradually tapering to the feet. As years have increased upon him he has developed more in the abdominal region, which gives him what we now denominate a well-balanced Vital Temperament. He has increased in weight with years, and has sometimes gone as high as one hundred and seventy pounds.*

The next temperamental element after the Vital is the Mental; the last and least is the Motive. He has plumpness, but not great hardness of muscle. His hand is soft, his skin comparatively fine, and his whole nature is sympathetical and magnetical. While some men have commanding talents, and that overbearing force of character which enables them to smite through difficulty and trample down opposition by sheer force, courage, and dash—we may say, indeed, audacity—our subject takes a different course. Though he is straight-

* Mr. Fowler's weight the day he left London was 166lb.

forward and outspoken, he is endowed with a great deal of judicious prudence. He prefers to lead rather than drive people; to persuade rather than to convict; to enlighten rather than to overbear. He moves in society with a quiet amiability; wins friends from every sphere; and when he left the United States for England, we believe it may be truly said of him that he left ten thousand friends behind and not a solitary foe. Perhaps it would be safe to say that no man living has a greater number of friends and fewer enemies. Those who know him best will not believe that he has an enemy on the earth. Yet he has force of character, a fair share of Combativeness, and rather large Destructiveness; but they are so related to his Cautiousness and Conscientiousness, to his Benevolence and Friendship, that he has remarkable control over his feelings under occasions of provocation.

He has enough of Self-esteem to give him a quiet consciousness of his own power, but he never manifests it in an overbearing spirit. No boy who was ever connected with the establishment will remember a single instance in which L. N. Fowler spoke to him with severity or injustice.

He is agreeable, considerate, and conciliatory, especially to those who are younger and weaker—those who are subordinate and subject to his dictation. Thus he has much real strength, with uncommon perseverance and self-reliance. He never gives up a point, but pursues it with quiet persistency.

The writer having observed for years the patience, gentleness, and generosity, forbearance and sympathetic kindness of Mr. Fowler, abruptly asked him once if he were as gentle, forgiving, patient, and forbearing inside as he seemed to be outwardly, and as everybody supposed him to be inwardly. He answered promptly: "No, sir; not by a great sight!" We grasped him by the hand and congratulated ourselves that he was tempted in all points like other people, yet was able to show the Christian spirit when not one in a thousand of mankind having his force of character would be able to do so.

Speaking more especially of his phrenological developments, we may say that his social organs are decidedly large. He resembles his mother, and has an affectionate tenderness towards women; he is very fond of children, and is always a favourite with them. His strong Friendship leads him to form attachments, to win people without any particular effort, and to hold that friendship unfadingly for a life-time. He has a full share of Cautiousness, which acts promptly with his judgment. He will rarely be considered timid, yet neither says nor does anything rash.

His love of home is uncommonly strong. No man is more

patriotic than he. His power of continuity enables him to hold his mind and feelings persistently to one line of thought and action, and for the time being to know nothing else save that which is before him or under his hands to be done.

He is fond of praise, but never acts as if he expected it; and when he receives it, it never seems to unbalance him. His Self-esteem and Firmness being rather large, tend to give him steadiness and stability, and when we add to this rather large Secretiveness, he is able to rise above the circumstances and hold himself aloof from being affected by them. Thus he



usually moves with an even tenor under circumstances of embarrassment and excitement.

He has naturally a strong religious tendency, his Veneration, Benevolence, and Conscientiousness being decidedly strong; while his Hope and Spirituality—perhaps ranking a little less in development—give him that anticipation of the good which the future is to reveal, and the opening of the vista of the spiritual and the immortal which elevates the thought and inspires patience under difficulty. He is inclined to work for the future; not solely for the present.

Would think much more of guiding people into the way of progress and improvement, so that his labours shall make his name fragrant a hundred years hence, than to fill his pockets to-day and enjoy the luxuries of life.

He has Acquisitiveness rather strong, and enjoys acquiring ; but he is not gifted with a tendency to lay up property. He shows his Acquisitiveness in other ways. He is a great collector of pictures, of relics and mementoes ; and in his travels in the Holy Land and in Egypt, Italy, and many other parts of Europe, as well as in the United States, he finds something to carry home from the places of interest visited. A stone, a walking-stick, a shell, a mineral, pressed leaves or flowers—these he treasures with uncommon fondness. He is just the man to collect a phrenological museum ; to get the skulls of men and animals ; take casts and busts of peculiar people, regardless of the money expenditure. The only question with him is, whether he has the money in hand to pay the bills necessary to acquire that which he wishes to obtain.

He has a historical intellect ; gathers facts and retains them with uncommon clearness. If he can get a portrait of a man or woman and learn their history, he will carry that history and recite it for years—not in the form of dry statistics, but clothed with the freshness of reality. He has an uncommonly good memory of objects, faces, magnitudes, places, and events. As a lecturer he rarely makes any attempt at what is denominated oratorical flourish, but he will put more facts, more matter into an hour's lecture, on the subject of phrenology, physiology, and character-reading than any other man living. In lecturing he speaks rapidly ; goes right onward to his point ; never waits for applause, nor looks for it ; never says anything as if he intended it to, or expected it would, produce applause. He never hesitates for a word, and pours a steady stream of interesting and earnest matter upon the ears of his listeners ; giving them no time to attend to anything but himself and his subject during the lecture hour. As an examiner he has no superior. He reads character with remarkable ease ; will say a great many sharp things of people who deserve it, but in such a good-natured way as not to chafe and harass them. As a phrenologist—both before an audience as a lecturer and as an examiner—he works with the utmost ease and smoothness, and the amount of work which he will do and not seem weary is most remarkable. He never says anything—either in an examination or a lecture—which seems stilted or strained, or as if he intended to produce thereby a startling effect ; and while he is not a bore in any sense as a speaker, we can think of nothing that more resembles his right straight

onward steadiness and clearness of statement than a sharp auger revolved by machinery boring through ten feet of solid timber, cutting steadily, and not stopping until it finds daylight at the other side. His method certainly resembles this more than it does blows with a hammer. He never wearies his audience, because he keeps their eyes and ears on the alert to gather his thought. He never repeats anything ; says it once for all and leaves it. Consequently he says something fresh at every sentence, and that keeps the interest awake.

He appreciates human nature—not only as a phrenologist, but by intuition and instinct—and seems to take people by the smooth side and wins their strongest and best qualities without exciting their unfavourable traits ; and we have always thought, as he moved among strangers in his lecture tours or received company in the office, that he met people in the most satisfactory way possible to enjoy life himself and to induce enjoyment in others. We never heard him flatter a person in a courteous way, or say anything that seemed intended to inflate one's vanity.

He is ingenious as a mechanic ; practical in his judgment ; critical in respect to the dispositions and traits of other people ; strongly inclined to associate with them in such a way as to make every man feel comfortable. But he has one weak side—that is, he is too liberal. People who need money or assistance will find him more mellow and yielding in this respect than almost any man that can be found. We have seen him lend money to people because they needed it, and the moment they were gone he would say, "I shall never see a dollar of that again ; but he needs it more than I do, and nobody else will let him have it."

He has a good constitution ; and though we would not call him a hard, tough man, he has great powers of endurance in the field of uniform effort and labour, and having been temperate so far as regards every form of dissipation all his life, he has not taxed his constitution in any respect so as to impair it. Therefore, it may be expected that he will live to be old. We expect he will lecture until he is about eighty-four. No man has been more thoroughly devoted to phrenology than he. He is less inclined to what is denominated literary labour—that is to say, the writing of books and expressing himself in print ; but he has that colloquial skill which enables him to deliver admirable lectures, full of marrow and nutriment, and to make examinations that are interesting to the listeners, and particularly adapted and appropriate to the individual under his hands. For more than forty years he has done nothing else but lecture upon and practise phrenology.

Had he not been a phrenologist, he would have been a preacher of the Gospel ; and in his line of preaching he has done probably a wider extent of good than he could have done in the pulpit. There are thousands of men who have expressed their thanks to him for turning them from the path of dissipation and wrong into that of truth, purity, and righteousness.

Our intimate acquaintance with Mr. Fowler and our great confidence in and respect for him, would lead us to talk much more strongly than the reader might approve ; but those who know him best will speak most strongly in his favour, or will most implicitly believe whatever others may say.

Lorenzo Niles Fowler was born in Cohocton, Steuben County, in the central part of the State of New York. His father was a farmer—a man of strong moral principles and an energetic worker. Lorenzo attended the school of the district, and assisted on the farm until he had reached the age of sixteen or seventeen, when he repaired to Dansville, Livingston County, where he sought the advantages of the academy, living meanwhile in the family of Deacon Shannon, and receiving the sympathetic advice of Mr. Hubbard, a most estimable minister of the town. From Dansville he travelled to Hadley, Massachusetts, to obtain better educational advantages and to further his preparation for a course in college. Like his brother, O. S. Fowler, he had chosen the ministry as his life's vocation, little thinking that the near future had a new and remarkable sphere of action for them both. Having gone to Amherst to complete his preparatory studies, he roomed with his brother, who was then a student in the college and a classmate with Henry Ward Beecher. This was in 1832.

The science of phrenology—introduced to the American public first in a methodical way by Dr. Caldwell, of Transylvania University—had already excited attention, but the visit of Dr. Spurzheim aroused a much higher degree of interest, particularly among the learned, and at the New England seats of education discussions were rife between the advocates and opponents of phrenology.

In Amherst College the subject created considerable excitement, and there were formal discussions in the literary associations of the students upon its merits. Mr. Beecher was among the students who took part in these discussions, and having on one occasion been selected to contend in opposition to the claims of phrenology, he sent to Boston for books treating of it, that he might be enabled to perform his part in the

debate with a knowledge of the new science from the point of view of the phrenological teachers themselves. The result of his study of the books, however, was other than the young and ardent collegian expected ; for he found himself overwhelmed by the weight of evidence in favour of the new system and gave his testimony in its behalf.

So strong became the interest of the brothers Fowler, that both determined then and there to become public teachers of the new science ; believing that in the phrenological lecture-field they would find desirable experience which would be of service to them in their after career as ministers or evangelists. They had not long entered upon the prosecution of the new sphere ere they found in it a career so wide and useful that they became satisfied that they could not do better than to persist in it.

Leaving Amherst in 1834, the brothers began to lecture in public, and from that time to this—a period of over forty-four years—they have been identified with the history of phrenology in the United States. In 1835 an office or headquarters was opened in the centre of what was then the business quarter of New York city. In the course of time branch offices were opened in other cities, as circumstances appeared to warrant such undertakings, but New York remained the chief centre for the publication of phrenological literature and the stronghold of the science.

Lorenzo divided his time between office-work and lecturing. In prosecuting the latter he visited all parts of the United States, besides Canada, Nova Scotia, New Brunswick, and New Foundland. An extensive tour made in 1858, '59, and '60, in company with his partner, Mr. S. R. Wells, was followed by a trip to Great Britain, where the phrenologists were cordially received in the different sections of the kingdom. The impression made by this visit upon Mr. Fowler's mind determined him to remain in England at least for a time ; he has, however, lived there ever since. During the greater part of his residence he has travelled in England, Scotland, and Ireland, lecturing on topics related to phrenology and temperance ; moral and physical reforms, and, indeed, reforms of every kind he weaves into his public addresses and private examinations,

When a boy of sixteen he was an earnest temperance advocate. In one of his popular lectures he thus alluded to that early experience as a moral reformer :—

“In 1827 I resolved to throw my influence into the scale of temperance, and solicited a number of my associates to meet together and sign a pledge to abstain from drinking alcohol.

Thus, in my boyhood, I helped to form the first teetotal temperance society that was formed in America ; little dreaming what an avalanche of influence would be thrown in the same direction in coming years by the Beechers, the Dows, the Marshes, the Goughs, the Hewitts, the Lees, the Trevelyan, the Liveseys, the Whittakers, the Morleys, the Noels, the Tweedies, the Forsyths, and many others."

His headquarters have been for several years in Fleet Street, and Ludgate Circus, London, and his time is fully occupied ; demands being constantly made upon him for lectures and addresses here and there in different parts of the kingdom. As a lecturer on reformatory themes, especially physiology, character, and temperance, he is one of the popular *habitués* of the English platform.

He has written much for the press in various ways. The little manual called "The Self-Instructor," which has enlightened thousands with reference to the principles of phrenology, was contributed to by him. In association with his brother he started the *American Phrenological Journal* in 1838. He originated the Almanac of Phrenology, which after many years developed into the present well-known Annual. A volume entitled "Marriage, its History and Ceremonies," was published by him in 1846, and had a large sale. Many of his lectures have been given to the public in pamphlet and volume form. A late issue of this sort is his "Twelve Lectures on Phrenology." Still another is "Lectures on Man." As a specimen of his manner of address when before an audience, we offer the reader an extract from his lecture on "What to Know, What to do, and How to Do it"—

"Wealth, rank, and power, are good in their place, but these are not so desirable as to possess the qualities of truth, love, and wisdom. The greatest good is done by the man who is truest to himself, his neighbour, and to his Creator. Most persons are not afraid to live, but to die ; while the fact is that the destiny of man is shaped more from his living than from his dying. It is much more a responsible act to live than to die. It may be a blessed thing to society that some persons die as soon as they do, but it is really a blessed thing to live, if we live aright in accordance with nature's laws. Do you wish to love some one ? Select one whose love and society will be a source of improvement and a healthy stimulant to awaken your higher faculties. Do you wish a guide ? Get the best, not the cheapest. It is not always the cheapest article that pleases in the end. Do you seek earthly treasure ? Get one you can use and turn to account. It will only be of service to you while you live. Treasures of knowledge and good

deeds are very valuable ; but treasures that will not fade or rust, that cannot be lost or stolen, but that can be transported to a spirit land, are best. Do you wish to be always among your friends and in good company ? Then learn to make such friends, and go with such company that will join you in your immortal journey ; for the finale of all things is mind, spirit, immortality, God.

“ Seek to mingle in that society which is characterized by merit. It is a far greater misfortune to be placed too high than too low in the social scale ; for in the one case we can rise, while in the other we may fall from our high estate, as all things seek their level. To attract attention some need to dress ; but if a person have talent and good sense, he can have a passport that will admit him to almost any position in society without reference to the externals of life. When a person is conscious of inferiority, he begins to feel as if he required something artificial to shield himself from close scrutiny ; hence he resorts to outside show and display.

“ The value of all love and friendship, centres in One ‘ who sticketh closer than a brother.’ In short—life, mind, time, and eternity, are valuable to man only because there is a greater, a higher, a wiser, and purer Being than himself, whose attributes stimulate him to attain as great excellence as possible. In proportion as life is true, pure, and elevated, can the ends of life be accomplished. The highest place man can reach or attain is to sit at the footstool of his Creator.

“ The most praiseworthy act man can do is to obey the highest tribunal. The most important deed man ever performed is to repent when repentance leads to reform and a new life. The two most important lessons man needs to learn are, how to live and how to love ; the next two are, how to forgive and how to be humble. Everything has its value according to its greatest and remotest good. The value of property centres in what we need to eat, drink, and wear. The value of all knowledge centres in saving knowledge. The value of all heroic deeds and struggles centres in those that conquer and control themselves. Honours and commendations are valuable in proportion as they are bestowed on us by one higher than man. The value of actions, knowledge, and time, centres in that act, knowledge, and moment of time, that decide our eternal destiny.”

ALTHOUGH men are accused for not knowing their own weakness, yet perhaps as few know their own strength. It is in men as in soils, where sometimes there is a vein of gold which the owner knows not of.—*Swift*.

GUILTEAU'S BRAIN.

The American *Medical News*, of July 8th, contains the official report of the post-mortem examination of the brain of Charles J. Guiteau, the assassin of President Garfield, by Dr. D. S. Lamb, acting assistant-surgeon, United States army, which is of so much interest to students of mental science that we deem it worthy of republication.

POST-MORTEM.

Skull.—The right parietal bone was slightly flattened over a space about two inches square just back of the fronto-parietal suture, and to the right of the interparietal ; there was a slight flattened elevation on the corresponding internal surface of the calvaria. The frontal suture was obliterated, the others quite distinct. A number of Pacchionian depressions were observed near the groove for the longitudinal sinus. In thickness the skull presented nothing remarkable.

Membranes of the brain.—The dura mater was firmly adherent to the anterior portion of the calvaria in the vicinity of the longitudinal sinus.

There were adhesions of the dura also to the base of the skull. They were quite firm and situated in the several fossæ, and most marked in the deeper parts of the fossæ, where also there were small patches, abruptly limited, of immovable arborescent congestion, with, however, no attendant thickening or pigmentation. This stagnation was again most marked in the left anterior and middle fossæ. There was no congestion of the dura except at the points just noted.

The dura and pia mater were adherent to each other and to the brain on both sides along a limited portion of the longitudinal fissure in the vicinity of Pacchionian granulations. The dura was slightly thickened along the longitudinal sinus. It was also slightly thickened and opaque along a portion of the line of the middle meningeal artery on each side. The arachnoid of the upper convexity of the brain presented in many places, where it covered the sulci, small patches of thickening and opacity ; elsewhere it was normal. The pia mater was anæmic anteriorly ; posteriorly there was slight hypostasis. The cerebral vessels appeared to be normal in all respects. The orbital plates were well arched and presented many conical eminences of large size. There was no roughening anywhere of the inner surface of the skull.

The brain was firm. Its weight, including the cerebrum, cerebellum, pons, and medula, and a portion of the dura, was

49½ ounces. It was slightly flattened in the region corresponding to the flattening of the parietal bone above mentioned. On section of the cerebrum there was an appearance as of slight thinning of the gray cortex; the measurements taken, however, gave depths of $\frac{1}{16}$ to $\frac{1}{8}$ inch in close proximity to each other. The white substance was almost absolutely anæmic. The cerebellum and island of Reil were both covered on each side.

The fissures.—The fissures generally presented a considerable depth; in many places, as in the right fissure of Rolando, amounting to $\frac{7}{8}$ of an inch. The right fissure of Sylvius was typical; the left was separated from the first temporal fissure by a slight bridge deeply situated. The right fissure of Rolando did not connect with the fissure of Sylvius; the left



Upper and anterior view of the brain, in which also a portion of the dura mater appears.

was separated only by a small bridge deeply situated. Both were separated from the longitudinal fissure. The first frontal fissure on the right side was not connected with that of Rolando, but at the posterior part was crossed by a secondary fissure. The same on the left side, except that the fissure was crossed by a small bridge near its centre. The second and third frontal fissures presented nothing remarkable. There were numerous secondary fissures. The præcentral and retrocentral fissures on each side were well defined, and were unconnected with other fissures. The interparietal fissure on each side terminated in the transverse occipital, separated only by a slight bridge. The parieto-occipital was well marked on each side. The transverse occipital fissure on the right side was ill defined; it began on the median surface

and extended well outward. The first temporal fissure was well developed on the right side ; on the left, was not of the usual length. Wernicke's fissure was well marked on the left side, but not confluent. The calloso-marginal fissure was double on each side, the upper of the two being probably the true one. On the right the upper one extended back to the anterior margin of the paracentral lobule ; on the left, not quite so far. The lower one extended on the right side to a line about half an inch in front of the parieto-occipital fissure, from which it was separated by a small bridge ; on the left side, also, by a bridge of larger size.

Orbital Surface.—On the right side were seven fissures radiating from a circular fissure surrounding a small isolated convolution ; on the left side were five fissures radiating from a small shallow depression. The left collateral fissure was well defined, extending to the anterior extremity of the temporal lobe ; the right was also well marked, but did not extend so far back as the other, and there was an attempt at confluence anteriorly with the temporo-occipital, a small bridge intervening. The left temporo-occipital fissure was well defined.

The Convolution.—The following alone call for remark :—The ascending frontal was well defined on each side. The ascending parietal on the right side was well developed in its lower three-fourths, but narrowed in the upper fourth. On the left side the narrowing was less marked. The island of Reil presented on the right side five fissures and six straight gyri ; on the left side seven fissures and eight straight gyri. The paracentral lobule was well marked on the right side ; small on the left. The accompanying drawing of the brain is from a photograph taken four hours after death.

Upon the above autopsy the *Medical News* has the following article :—

Notwithstanding the advances made in the means of observation and in the interpretation of changes discovered in the nervous centres in cases of mental disease, it still remains true that there is no necessary dependence of even extreme mental perversion on recognizable lesions. It is not safe to predict that, a mental disease being given, a certain series of morbid alterations must be found. On the other hand, the existence of very extensive disease of the cerebral structures is not incompatible with a perfectly normal state of the mental functions. It is becoming more and more evident, however, with the progress of knowledge, that the number of merely psychical derangements is lessening rapidly ; indeed, there are now few psychiatrists, if any, who maintain that ancient

theory of insanity which refers all cases to the domain of spiritual derangement, in which there are no discoverable lesions. The alterations in the psychic sphere are now generally referred to some change in the organic substratum.

Interesting experience, clinical observation and experiment tend to show that minute alterations in the cortex suffice to produce extreme mental derangement, when extensive coarse lesions in the other parts of the brain have little influence on the operations of the mind. It is probable, indeed, that mere molecular changes in the gray matter of the mental sphere may much affect its functions. So much uncertainty attends the demonstration of these minute changes that there is a growing distrust regarding the genuineness of many observations. Post-mortem changes take place with such rapidity, the preparation of sections for the microscope so modifies the structure, and so high is the skill necessary to produce good results, that structural alterations not demonstrable by coarser means are looked upon with some uncertainty, if not with suspicion and distrust. Hyperplasia of the delicate neuroglia, granular clouding of the cells, amyloid bodies, &c., if alone discovered, and not accompanied by other distinctive evidences of pathological change, will hardly be considered to prove in any doubtful case the existence of insanity.

Applying these principles to the demonstration of Guiteau's morbid cerebral anatomy it must appear from the report of the autopsy that those psychiatrists who expected to demonstrate the assassin's criminal irresponsibility by the changes in his brain will have a rather difficult task. If they expected to find deviations from the normal type of brain structure, the evidences of chronic meningitis, dilation of the ventricles, atheromatous degeneration of the vessels, dilation, fatty degeneration, amyloid change, &c., of the perivascular lymph spaces, wasting, or the *état criblée* of the gray matter, and the other numerous changes in the intra-cranial organs of the chronic insane, they are certainly disappointed. Some deviations from a typically normal brain are referred to in the report, but they have absolutely no signification from the point of view of mental derangement. Adhesions of the dura mater, and the thickening of the membrane, without any evidence of co-existent inflammation, cannot be said, indeed, to have any pathological significance.

It may be affirmed of Guiteau's brain that it presented as little evidence of pathological change as the brain of any one of his age dying of some other than cerebral disease. What may be disclosed on microscopic investigation, which is yet to be made, remains to be seen. Here the opportunities are

great for unconscious deception and for differences of opinion. As the naked eye appearances are so little suggestive of disease, the minuter changes must be well fortified by the skill and experience of the microscopists undertaking the investigation, to be accepted without reserve. There must be no preconceived opinions, no previous predictions and no prejudices of any kind on the part of the microscopic experts to give a bias to their conclusions. They should, indeed, enter on this investigation in the spirit in which the autopsy was conducted.

The examination, the record of which we print to-day, was made with the view to ascertain the pathological conditions and the anatomical peculiarities; the interpretation of these appearances as bearing on the question of insanity formed no part of the duty of those making the autopsy. Let the microscopical examination be conducted to the same end—to the demonstration of the actual condition, quite irrespective of the effect the conclusions may have on the opinions and judgments of those experts who have committed themselves in advance. We may advert to this subject when the report of the microscopical appearances is published.

THE FACE AS INDICATIVE OF CHARACTER.

THE CHEEKS.

The breadth and fulness of the orbital process of the cheek-bone at the outer angle of the eye (Fig. 97, *h*) indicates the

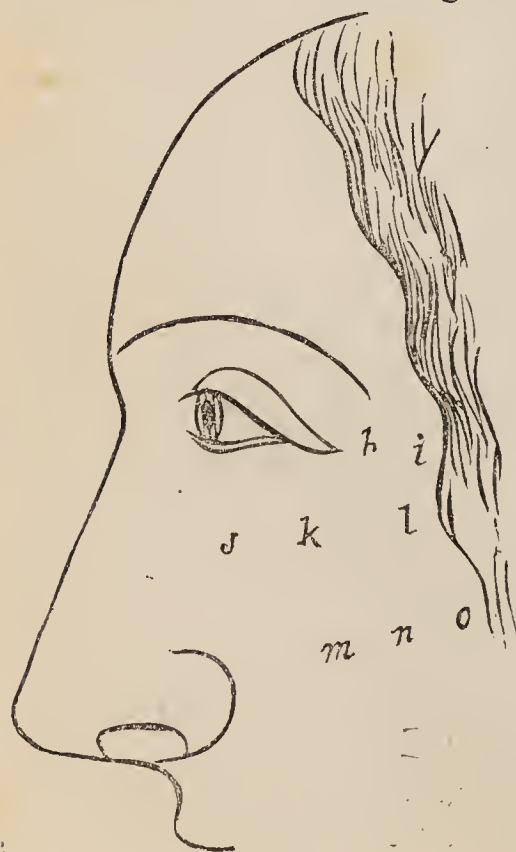


Fig. 97.

faculty of Wave-Motion. "One who has it large," says Redfield, "loves the motion of the sea when it is disturbed by the wind, is fond of the rocking of a vessel on the water, or of a swing or cradle; exhibits wavy or graceful motion in his gait or gestures, and is particularly fond of dancing. The sign is very small in the Irish (in the lower classes of the Irish possibly, Dr. Redfield, but not in the Irish as a whole), who show but little of the faculty in their motions, and who care little for the accomplishment of dancing. It is large in the French and Italians, and particularly large in the Spanish, who in their gait are the most graceful people in the world, and who,

above all others, exhibit wave-motion in their dances. The actors in the well-known Spanish dance appear like a moving sea ; and, indeed, we may say there is no other dance than this, or such as this, unless we allow that a succession of hops may be called dancing." In Spanish women especially the sign is very large, giving a fulness at the outer angle of the eye, as in the accompanying figure (Fig. 98).

Animals of the feline family have the sign of wave-motion large, and the gracefulness of their motions attest the presence of the faculty in a high degree.

The prominence of the cheek-bone under the eye, at the point indicated by the letter *j* in Fig. 97, is the sign of the faculty of Watchfulness. This sign is very large in distinguished generals and naval commanders, who need to exercise the faculty so much. It is particularly large in Napoleon,



Fig. 98.

who is said to have taken but about four hours out of the twenty-four for sleep. In watchmen, too, and in physicians, as also in good nurses, the sign of Watchfulness is larger, as a general rule, than in other people. One who has this faculty in a high degree needs less sleep to restore nature than one who has it small ; the latter should not be required to sit up as late or rise as early as the former. It is large in the Indian ; large also in the cat, the dog, the fox, the owl, and most carnivorous animals ; less in the vegetable eaters. Fig. 99 exhibits the sign large.

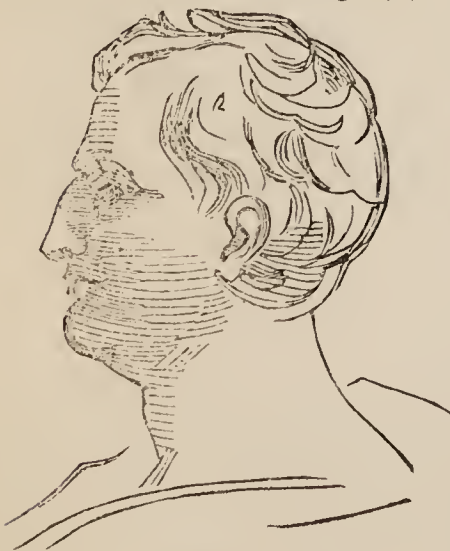


Fig. 99.

The downward projection of the angle of the cheek-bone, under the sign of Protection (Fig. 97, *m*) indicates the faculty of Love of Rest ; and outward of this, under the sign of Hurling is indicated the faculty of Repose (Fig. 97, *n*). A very natural action of the faculty of Love of Rest is the supporting of the head upon the elbow, with the sign of the faculty in contact with the back of the hand, as represented in Fig. 100. In this position the knuckle of the middle finger naturally comes in

contact with the sign of Rest, while that of the index finger is under the sign of Repose. One who has much perpendicular

breadth or downward projection of the cheek-bones from the angle backwards, has great capacity of resting and reposing, and will show great partiality for conveniences for this purpose. If he have not a large sign of Watchfulness he will be very liable to drowse in church, and to lay himself open to the charge of laziness. A person in repose very commonly lies with the hand in contact with the sign of the faculty, between the face and the pillow. In the cat and the dog, in sleep, the same peculiarity may be observed.



Fig. 100.

Connected with the faculties of Rest and Repose there is the faculty of Sleep, a deeper state than either of the others. The ability to slumber or to sleep soundly, so that it is difficult to rouse oneself or to be roused, is indicated by the long process of the lower jaw, which rises up under the temporal arch, and to which the temporal muscle is attached. The ordinary action of the muscle is in proportion to the sign of Sleep, and closes the jaw lightly at its back part. If it were not for this connection of the temporal muscle with the sign of Sleep, the jaws would fall apart while a person is sleeping, the voluntary muscles being then relaxed. This is evident from the fact that when a person is so exhausted that he cannot sleep, at the same time that he has no longer the power of watching, the jaws fall asunder. To the signs of Rest and Repose is attached the strong muscle called the *masseter*, which closes powerfully the fore part of the jaws, as in biting. Hence the jaws are closed more tightly during rest and repose than during sleep; and without this connection of the muscle with the signs of Rest and Repose the jaws would separate as soon as the muscular system was relaxed from the absence of wakefulness. The carnivorous animals possess these faculties in a superior degree.

LET your girls rely in some measure upon their own judgment. Send them to do their own shopping. Trust them with the money after giving them as much good advice as you please. Let them learn how to buy by actual experience. If they make some mistakes let them abide by them just as you have to do. Said a boy of a brother skater who had met with a tumble: "Let him fall down. That's the way to learn." It is the way we all learn a great many things.

LECTURES ON PHRENOLOGY.

BY DR. SPURZHEIM.

LECTURE XVI.

Another important question now arises, namely, how far phrenology is applicable in social intercourse. The question is, can we make use of phrenology in practical life, and how are we to do so? I confess that the study of phrenology becomes infinitely more difficult, if you wish to make an application of it to individuals. You may be very anxious to ascertain the functions of each part, and say, that if you know an individual who has one feeling more active than another, you will find in his head that part, which is the organ of the feeling, more developed; therefore finding one part more developed than another, you may be sure that the fundamental power situated there will be more active than another; but if I am to speak of the actions of a man, then I know that is very difficult indeed. It is so difficult, that I am almost afraid to mention all the difficulties; on the other hand, I have no objection to do so, since I fear more from ignorant friends than from avowed enemies. Those who endeavour to make an application of phrenology without having well studied it, must do mischief; the same in this as in any other science. If you wish to practise medicine without knowledge, you must do mischief, and if you attempt to interpret the will of the Supreme Being, without knowing the human heart, you will do mischief. So in phrenology; ignorance is the greatest misfortune, and is most dangerous to the science; I therefore wish you to know the difficulties of phrenology. Having a wish to make a practical use of phrenology in society, if you find an individual organization very large, do not hesitate about it, you may venture to ask whether, with respect to a certain feeling, the person has it strong or not. You may be sure that it is so. But the question is, can we consider the actions of any man? Let us first consider, that in speaking of others, we must not think that we are all alike, that others are like ourselves. This is commonly done, and is certainly a very great error. We cannot represent even the Supreme Being, unless endowed with faculties, and you see now how far I go. But every one will suppose certain dispositions or attributes to exist in the Supreme Being which he considers necessary for man. One will have a Supreme Being of mildness and of love, and another, one of terror. So if you look to the attributes of the Deity, represented by those who speak

in the name of God, you will see how far the natural feelings influence our conceptions of the Supreme Being. Look at the Reformers, and you will find Melancthon's representations quite different from those of Calvin. Look even at more ancient times ; if you read the epistles of the apostles you will find one speaking of a God of terror, and another of love. To come to the point, if you wish to arrive at a knowledge of other beings, through phrenology, you must be convinced that they all differ. Every one is inclined to look for the feelings in others which he has himself. Some powers are strong, and others are weak, but you must judge of them by some standard, not pursuing what you like or believe, but all must be judged according to the same standard. Every one is modified ; you will never find two persons exactly alike although their countenances are composed of the same integral parts, so each power acts in a modified way although each is essentially the same. You must remember this, and be attentive to it. The five external senses are modified, and the internal powers are modified. Take any power whatever, and you will not see that the action of the same power is exactly the same in another. These things must be considered in our judgment of characters.

Let us make some observations to prove that the actions of each power must be modified in consequence of the combination of the powers. This is the first notion. Each power acts, but it is modified in its action by the combination of other powers. Hence, if you see an organization large in any one, can you tell from that alone how he will act ? If you attempt to do so you will do harm, therefore take care ; study phrenology. I invite you to do so ; but do not attempt to make an application of it before you know its principles. Suppose I see a person who has the organ of Self-esteem large ; you may ask me, what do I learn from it ? Seeing that part larger than another, I know that the person has a good opinion of himself, and that is all. It is a great point in phrenology, even to reach thus far ; it is a point gained. But if you ask how that self-esteem will be applied in society, then I say that I must judge of that by considering other points. First, the powers are not active, according to their absolute size ; the same size, in different individuals, may be more or less active according to difference of constitution. Hence study, secondly, the constitution, or temperament, and if the individual be of the lymphatic temperament, the power will be less active ; hence, as you found the organ large, you would know from that merely, the person had a good opinion of himself, and the inference you would draw from observing

this temperament would be, that the organ would not be extremely active. Then you would look to the natural language, and observe the indication of the powers, see whether there is great activity in the external senses, in voluntary motion, and so on ; and if you find, although the part be well developed, no great signs of activity externally, then you may infer that the power is not very active. Then the Self-esteem will not act by itself ; it will be combined with all the other powers, and will be modified by external circumstances, as the situation in which we live, by education ; so that before you make an application of phrenology to the description of character, you must learn all these circumstances, and then look to the combination of the powers. In the bilious and nervous temperaments you must make similar allowances, and seeing greater activity in the whole system, I would infer that the activity of the organ is greater. Now, then, I shall continue this power, still keeping to Self-esteem, and see whether the animal powers are most developed ; whether Self-esteem is combined with the animal powers, or whether the powers proper to man are most developed, and consequently combined most with that, or whether it is combined with all.

In short, you must compare any power with all the others, in order to guess what direction the power will take. Hence, you may compare the most noble and the most ignoble characters by a combination of other powers, the organ of Self-esteem being large. Combine this with the human feelings, and take away the animal faculties, and see how the person will speak of himself. He will have a good opinion of himself, but he is benevolent, just, and respectful, because all these unite, and really this combination forms a most useful character. You cannot speak of nobleness of mind without self-esteem ; I defy you to find such a character. In this way I might go through all the other powers, but I shall only endeavour to show you that it is of the highest importance that every one, before he attempts to make any practical application, with respect to individuals, should study all these points. What has been hitherto said is merely the physiological part of phrenology, namely, that the size of the organ is merely sufficient to determine the activity of a power, but that it is not sufficient to enable you to speak of the determinate character, or the determinate actions, since they are modified in the way I have just described.

The subject is important, and therefore I shall give you several applications. Suppose that a man goes to church on a Sunday : shall we see in every such man the organ of Veneration large ; or that all who go would consider themselves as

committing sin if they did not go? Do not many go because they wish to obtain the good opinion of others, and many to see and to be seen, as the ancient poet said, "*veniunt spectentur ut ipsi*"? Now phrenology shows the motives of all actions, and does not consider the actions alone. One man gives to the poor, but shall we find Benevolence large in every man who gives to the poor? A person may give his fortune to the poor, and do it from benevolence, but men give to the poor from various motives. We cannot say of any one, seeing an organ large, that he will do such and such a thing; that would lead to the irresistibility of action, which phrenology by no means teaches, because the powers have a mutual influence, and each power, acting in combination, is modified by the conditions under which it may act. I know that beginners do not like these difficulties, but there are difficulties in all sciences, which require perseverance to overcome. To combine Veneration with other powers—with Marvellousness and Individuality, I will suppose—shall I say, that because the person has Veneration he is fond of going to church. He has the power which disposes a man to pay respect; but can you say that the power shall act in a determinate manner? No. Suppose a man to have Marvellousness combined with Veneration and Destructiveness at the same time, the act of satisfying these powers will very much depend upon circumstances, and he will satisfy them differently in England to what he would in Spain or Italy. Some would say, having this combination, let us destroy another man because he does not believe, and so to save an individual from hell, and make him love the Supreme Being, he must be killed. Another would say, having Benevolence instead of Destructiveness, combined with Marvellousness and Veneration, let us love another, and try to convert him in that way, even as the Supreme Being is a being of love. Suppose I see five or six persons, and Veneration strong in each, knowing that the actions depend upon the combinations of the powers, I am sure that they will not venerate the Supreme Being in the same way.

In society, many circumstances may occur to prevent or excite the action of a power, and therefore each individual will attempt to satisfy his Veneration in such and such a manner, according to the combination of his other powers, and hence it is easy to conceive why no two will satisfy it exactly in the same way. Suppose a man has Veneration, and wishes to preach, how will he preach? I am sure every one will preach according to the combination of his powers; one will preach in the most gloomy and fearful way,

and another will embrace everything with love, hoping everything, and believing everything. One will use simple language, and quote facts, and another will be eloquent and draw his descriptions of characters and events in glowing colours. How do you suppose he would preach? (Showing a miserable cast.) Do you think he would preach by the intellectual operations, or the lower feelings? I would say such a man would preach in the religion in which he was brought up; but in order to give a little something original, it is necessary to have a little more here. (Ideality and Comparison.) One preaches with reason, and likes to examine subjects, and so on; whilst another is a moral preacher, who preaches according to the letter, and never goes beyond it—who does not know “the letter killeth, but the spirit giveth life!” Now compare the foreheads of these men, and you will be sure to find that in one the intellectual powers act more with Veneration than in the other. One comes with Predestination and principles of that kind; you may see determination in the character; he likes to speak of a positive command, and you may observe Firmness and Self-esteem combined with his Veneration. Others, again, are just as weak, insist upon nothing, solicit and entreat everything; they are ambassadors who beseech and “pray you, in Christ’s stead, to be reconciled unto God.” There are many persons brought up to the church, who ought to have been brought up soldiers; and there are moral parsons, of whom some persons complain that they speak only of morality through the whole year. The combinations are almost infinite, and the direction in which the mind goes will be according to the natural dispositions. Hence, seeing an organ developed, you cannot speak of its action unless you observe its combination with the other powers.

Again, suppose a man wishes to do something pleasing to his Heavenly Father, and he thinks to amuse Him by destruction; a man of delicate feelings would not think so, but I can conceive that some persons have imagined that they have been right in their own consciences, gratifying the Supreme Being, and doing Him service by destroying others. Give such persons more of the lower propensities, with Veneration and Destructiveness, than the higher, and see what they will do. I should say, that those who instituted the Inquisition, and were so zealous in persecuting others, had this combination. Every one must take care in judging of others by himself, or he may be easily deceived. A man has some feelings strong, and he thinks it is right to satisfy these feelings; and if he have the lower feelings stronger than the superior feelings, he will wish to satisfy them, and will think

others wish to satisfy similar feelings, and that the same feelings must be pleasing to the Supreme Being because they are pleasing to himself.

This is a very important point for those who make institutions, whether religious or civil, to attend to ; great mistakes are made here. Go to an institution of education, and those who have an inclination to make themselves the standard of mankind will found an institution to make others what they are themselves ; but a mathematician must not think that the whole world are to become mathematicians ; nor a man who likes the ancient languages infer that every person must like the ancient languages ; it is important not to take others as we find ourselves.

How different do we find parts in consequence of the combination of Ideality with other powers ; combine Ideality with the lower feelings and with Veneration, and the poetry will be very different from a combination of that power with others. So again in Conscientiousness, or the love of justice, or in the execution of justice, do we not find that legislators show the disposition which they feel themselves ; one is lenient and another is severe. Look at the manner of action of the power numbered 1, and combine it with 2, and you will find a great diversity in the manner of acting. Two mothers may love their children equally strong, and when they do wrong, one will cry for them and the other will punish them. So with Cautiousness and Acquisitiveness : having Acquisitiveness there is the desire to acquire, but shall things be acquired with morality, or in a way not exactly just ? You see how difficult, therefore, the study is, and the mistakes made for want of study are almost innumerable.

The study of the combination of the intellectual faculties becomes very important. Suppose I see an individual with certain intellectual powers strong ; if I know certain conditions, then I may speak of the application, but without knowing the situation in which the person lives, or of the education he may have received, I cannot speak of their application. I will take the power of Language, as that may be interesting to all. Now, in the study of language, it will be found that there are many signs in a language for the same power in some nations more than others ; and in this nation there are less signs for the primitive powers than in some others. In some languages there are many signs for the same power, and on the other hand, you know, that there are several terms which cannot be translated. You cannot translate the English word wit into French ; you may say *bel esprit*, or *esprit de saillie*, but that does not exactly express wit. The

term modesty is differently used in Great Britain and on the Continent. Therefore in language you will find, that as various powers are more active, so you will find more signs which indicate the activity of the individual powers, and then as these powers are disposed to act in different combinations, so you will find quite a different spirit in the languages. If I speak now of the French language, I know that it admits of a greater number of individual signs than the English or German, in consequence of the composite nature of their words.

Beings are observed, and then they are arranged into species and genera, and so on, as in birds there are many varieties of finches; the name is derived from the German *finke*, but you have a general term for the genus, and modified names to specify all the varieties. Linnæus was very much assisted in his classification by the German language. There is, in the composition of that language, a disposition to generalize and to specify, and in others there is not so much. Then we infer that Comparison is active, besides Individuality and Eventuality, which gives a spirit to the language. There are nations which like the figurative senses and sciences, and others which do not; so that the study of a language indicates the activity and combination of the intellectual powers, not only in inventing the signs, but also in their construction. If you compare the construction of languages, you will find that they differ very much. Compare the Greek with the English, and you will find they are very different, and the construction is modified by the constitution of the mind. Every one who learns the foreign languages must observe, that the powers follow in one order in one language, and in another order in another. Some begin with the causes, and the effects follow, whilst others begin with the effects, and the causes come after; this is the case in the French language, but it is different in the German; for that compares the facts, and then comes the effect; and this is the result of a combination of the powers of the mind. Observe the operation of the reflective powers; do they go alone? No, they go in combination; give a man Individuality and Eventuality, and you will have a man of facts; but combine them with Comparison and Casualty, and then you will have somewhat more of a philosopher. Let this be sufficient to call your attention to this point, that, in speaking of actions, you must combine the powers, and this is an important, but at the same time, a difficult study. It must be difficult from the number of the primitive powers, seeing that there are thirty-five;* their combinations must be infinite. What a

* See foot-note on p. 233, June Number.

multitude of words will the twenty-four letters of the alphabet produce ! Now consider the combinations and then the modifications of each, and you will easily perceive why it is that you can never find two persons exactly alike.

Let the powers which exist be usefully employed, and by their combination you may conceive of a great variety of characters. If you wish to make a study of character, learn to combine, for there is an infinite number of characters ; try its degrees. What is very singular, I find more bad names in the dictionaries than good ones, and this shows that the animal powers are more active, because a bad character is the result of the combination of the inferior powers with few of the superior. We have seen, in the physiological consideration of phrenology, that the lower powers are more developed than the upper. What we call a good character, then, embraces the activity of a greater number of the superior powers, and a bad character the lower.

Suppose I say that there is an individual very good-natured, benevolent, charitable, but who has not great talents, and I come to another who has talents, but is destitute of the other feelings ; how can I know this in society ? Without entering into particularities of character, if I see that his head is well developed in the anterior and upper part, then I know that he is a good-natured man. If I see another who is developed in this direction (upper and back part), then I would say, take care of him, he is very touchy. Even persons who have made some progress in phrenology have made some errors in their attempts to discriminate characters, hence the great necessity of studying all the circumstances I have mentioned. I shall give you an example : it has been said, that all great artists have Secretiveness ; is it true that Secretiveness is a feeling necessary in order to become a great artist ? Do you think that it is essential to have Secretiveness in order to become a great actor, or a great painter ? I admit of Secretiveness as a fundamental power, but not that it is essential to either of these characters, since we find great artists with and without Secretiveness, and great actors with and without it. In my opinion one power can never produce any great talents ; no one power can make a man a good musician, a good painter, or a good poet. Although I grant that several powers are necessary for each, yet I will allow that a good poet cannot describe a cunning character well without having the feeling himself. Shakspeare must have possessed the feelings which he has described so well. A musician must have other powers than those of time and tune, or he will never become a good composer. If a musician has Secretiveness, he will know how

to get on in the world, but he is not a good musician because he has Secretiveness ; those men who make their way best, and know how to adapt themselves to circumstances and situations, have Acquisitiveness. Hence I say, that those who study the combination of the powers ought to be acquainted with the first principles of phrenology, and one is, that every power is fundamental and has never two sorts of action ; and whenever you see a feeling active, you may be sure that that fundamental power exists ; and by that fundamental power is meant a peculiar tendency to a certain action, and nothing more, as I hope I have fully shown.

There are other characters who are very touchy, and we must take care of them in society ; they are fond of complaining of the world, and fancy they have not received their deserts ; they are not satisfied ; even their friends say that they do not know why, but that they are very singular. How would you know such a character ? He may be a good friend and wish to be good, but he may be easily displeased, and irritable, as we say. I should say of an individual like this (showing a cast), take care. He may be a very reasonable man, but there are feelings hereabout, Self-esteem, Firmness, and Love of Approbation, and he may have Ideality as well, and then he is what is called a conceited character, because Ideality exalts all the other feelings, and therefore he may have the power of Self-esteem so strong as to wish to be considered superior to others. I have never seen an individual possessing this combination who has been pleased with the world.

There are serious and gay characters ; there are persons disposed to seriousness ; children, when very young, sometimes show a disposition to be serious, and they are commonly too much overlooked. They are fond of thinking, and when they grow up they will often reflect for themselves, and throw off prejudices in which they have been brought up. If I see an individual serious, I know I must encourage that feeling a little to draw him out. Give such an individual Circumspection, Firmness, and a little Self-esteem, and he will keep himself to himself, as they say ; he keeps himself shut up. Draw out such a person, and you will find more in him than you expected. There are some who go into the world with half the talents and half the education of others, and they get on ; and others of great talents remain long in the back ground, because they have to receive from reason that knowledge of the world which the other acquires from nature. Some men accommodate themselves to the world, whilst others expect the world to be accommodated to them. Give a man

Individuality and Eventuality, and he will know the beings around him ; and give him a little Secretiveness, and he will make his way ; he will accommodate himself to persons and places ; he will say, it is not necessary to reason with everyone, no, no, let them go on. Give him the Love of Approbation and see how he gets on then ; he will please persons, and wish, by doing so, to be applauded. Such a man has talents to get through the world ; he will be inclined to say to every one, "I am your obedient, humble servant."

Dr. Spurzheim concluded the lecture by a brief recapitulation of the principal circumstances to be borne in mind in applying the science of phrenology to the discrimination of character.

HABIT OF OBSERVATION.—MEANS FOR ITS CULTIVATION.

Our power of observation may be cultivated by attentively observing likeness and unlikeness, or resemblances and differences, in whatever comes within the range of the senses. It is by such an exercise of the senses as will impart to them activity, acuteness, accuracy, facility, and strength that the desired cultivation must be accomplished. Appropriate exercises of the organs of sense will add these qualities to the several powers of the mind ; and this addition of more activity and strength to the mind by experience constitutes that which is understood by the terms development, cultivation, education. As the elements of thought are multiplied by observation, ideas are more and more readily formed ; and thus the more we learn correctly, the more easily can we acquire additional knowledge.

Observation is not so much a faculty of the mind, as a common term used to express the results of the action of several mental powers, prominent among which are those of perceptiveness, conception, and attention. The act of observing springs from the natural desire to know. This act, in turn, reacts on that desire, stimulating it and increasing the power of observation. A child, whose powers of mental acquisition have been properly exercised, will acquire the habit of observation, and thus increase his ability to gain knowledge.

To observe is not merely to see, and hear, and feel, but to see, and hear, and feel with such attention as to perceive clearly and accurately. The more the observation is thus employed, the more will be brought into the view of the mind by sensations and perceptions.

Observation should first be employed upon those qualities which act directly upon the senses ; since the more these are noticed, and the more ideas of them are associated together, the better will be laid the foundation for future knowledge. In the works of nature there is much more to excite the observation of children, as well as much more that can be made the subjects of pleasing instruction, than in the works of art ; but the judicious instructor will not be at a loss to find numerous objects within doors, as well as without, to thus aid in the process of mental culture, especially such as will stimulate the mind to a careful observation of nature.

The habit of observation depends, in part, upon the general culture of the mind, especially upon the associated thoughts and feelings connected with external objects. Sensations often repeated, without being perceived, cease to excite the notice of the mind, and its noble powers lie dormant from want of exercise.

Those who have been engaged in the business of education well know the different degrees of accuracy and quickness of observation that are found in children, and also how important it is, for progress in intellectual culture, that this habit should be early formed. Childhood is the period of observation, and it should then be made a primary object in training. Observation is of essential value in every branch of education, and in every department of life. The successful acquisition of every science depending upon experiment—indeed, the acquisition of knowledge of every kind which depends upon the exercise of the perceptive faculties, the cultivation of taste, information relating to the common concerns of life, and even the civilities of society—require a constant exercise of this habit.

So long as the observation of a child does not rest merely with the immediate objects of perception, but continues to connect them with that information which the instructor communicates, or which has been derived from past observation, it is very usefully employed. Whatever method is found to invigorate and render the powers of observation more accurate should be frequently employed. Till the understanding has made considerable progress, this should be a leading object in intellectual culture ; and in every period of it the habit should be frequently brought into use. By a proper exercise of it the memory and judgment are directly cultivated ; and, while it strengthens and rouses the energy of the mind, it furnishes it with some of the most serviceable materials for the understanding.

Exercises for the culture of observation in young children should be limited to a few minutes at one time ; but these

may be gradually lengthened as the children acquire greater command over their attentions, and manifest a greater desire for information. Many objects should, at first, be offered successively to their notice, because the immaturity of their minds does not permit a minute investigation of each; and attention can then be kept up only by variety and novelty. As their powers of observation increase by exercise, the subjects for consideration may be gradually diminished, until one may suffice for a single lesson. When advancement has been made, they may be required to attend more closely to a single object for a greater length of time, and thus attain more thoroughness of information. But let it never be forgotten that long confinement and protracted application to one subject should be carefully avoided with young children. There should be no gloom, no misery, associated with the first intellectual exertions. Happiness is the privilege of childhood.

THOUGHT-READING.

In the cases last considered, the explanation may be suggested that some code of signals may have been arranged by which the proper answer was communicated to those questioned. The following cases are free from this objection:—

“It will be well to give,” writes Professor Barrett, “a group of results obtained when no member of the family was aware of the selected object. Eleven times running we chose a card at random, and on six of these occasions one of the children named the selected card (giving both suit and pips, or fully designating the court card) correctly at the first trial; twice the card was named correctly on the second trial; and three cases were failures. On none of these occasions was it even remotely possible for the child to obtain by any ordinary means a knowledge of the card selected. Our own facial expression was the only index open to her; and even if we had not purposely looked as neutral as possible, it is difficult to imagine how we could have unconsciously carried, say, the two of diamonds written on our foreheads. The outline of results during the present investigation, which extended over six days, stands as follows:—Altogether, 382 trials were made. In the case of letters of the alphabet, of cards, and of numbers of two figures, the chances against success on a first trial would naturally be 25 to 1, 51 to 1, and 98 to 1, respectively; in the case of surnames they would, of course, be indefinitely greater. Cards were far most frequently em-

ployed, and the odds in their case may be taken as a fair medium sample ; according to which, out of the whole series of 382 trials, the average number of successes at the first attempt by an ordinary guesser would be $7\frac{1}{3}$. Of our trials, 127 were successes on the first attempt, 56 on the second, 19 on the third, making 202 in all. On most of the occasions of failure, 180 in number, second trials were made ; but in some cases the guesser professed inability, and declined to make more than one, and in others we allowed three ; no trial beyond the third was ever allowed. During the last day or two of trial, after it had occurred to us to notice the point, we found that of the failures to guess a card at the first trial, those wrong both in suit and number were a small minority. Our most striking piece of success, when the thing selected was divulged to none of the family, was five cards running, named correctly on a first trial ; the odds against this happening once in our series were considerably over a million to 1. We had altogether a good many similar batches, the two longest runs being eight consecutive successes, once with cards, and once with names ; where the adverse odds in the former case were over 142 millions to 1, and in the latter something incalculably greater. If we add to these results others obtained on previous visits, it seems not too much to say that the hypothesis of mere *coincidence* is practically excluded."

"The exceptional nature of this inquiry," proceeds Professor Barrett, "goes far to invalidate arguments founded on character and demeanour ; and, on this head, we will only state our conviction that any candid critic, present during the whole course of the experiment, would have carried away a far more vivid impression of their genuineness than the bare printed record can possibly convey. Of more real importance is the hypothesis of exalted sensibility of the ordinary sense organs. We could discover no indication of this in any of its known forms ; but by way of precaution, as has been already stated, we commonly avoided even whispering any word, number, or name that we had selected ; and the position of the excluded child, when the door was opened, would in every case have satisfied the most exacting critic. The explanation which might be sought in unconscious indications given by the sitters, and especially in the movement of the lips, has been already adverted to. Coming as we did to this investigation with considerable previous experience of the same kind, we were throughout strictly on our guard against giving such indications ourselves ; the possibility of their being given by the family was, of course, excluded

where the family were ignorant of the selected word or thing; and on the remaining occasions our perpetual vigilant watch never detected a trace of anything of the kind. The absolute docility of the children—both the guesser and the others—in taking any position in the room that we indicated, was naturally an assistance to our precautions. It may be further mentioned that, on a previous visit made by one of us, the child called the required name through the shut door, or from an adjoining room, having thus been completely isolated from the very beginning to the very end of the experiment.”*

Other evidence of this sort will be considered further on. At this stage it may be well to note the objection raised by Professor Donkin. “The matter in question,” he says, “has obtained a somewhat undue prominence of late; but if it is as simple and intelligible as it appears to be to most who have investigated it with care, and with minds free from mystical bias, any aid towards the extinction of what must then be regarded as an *ignis fatuus* of pseudo science carries with it its own justification.” Passing over cases in which there was actual contact between the persons guiding and guided, Professor Donkin remarks that in cases where there was no actual contact, “common sense demands that every known mode of explanation of facts should be exhausted before the possibility of an unknown mode is considered.” “It is equally obvious that in all scientific inquiries the good faith of individuals concerned should form no part of the data on which the conclusion is to rest. We can never call on science to put deception out of court by a belief in any one’s integrity. Half of the evidence which has propped up the spiritualistic craze is based on the results obtained through mediums of ‘unblemished character’ in private families, whose virtuous reputation has been largely sustained by the fact that they did not take money for their trouble; no regard being paid to innumerable other motives and tendencies to deception.” (This is very well put.) He then considers the “code of signals” explanation, which “fully serves to cover all the facts in question,” though it is only by straining the evidence that the cases in which no members of the family were present

* “Among the friends above referred to as having taken part in these inquiries are Professor Balfour Stewart and Professor A. Hopkinson, of Owen’s College. A communication lately received by us from them, embodying the results of their visits, and written without any knowledge of the contents of this paper, states facts and instances criticisms as to the possible (or impossible) relation to those facts of *coincidence*, *collusion*, *sight*, and *hearing*, precisely similar to those we have given. Their experience was that ‘in about half the cases the first guess was right, and in most cases of mistake there was some marked point of similarity between the object proposed and the thing guessed.’”

when an object was selected, that Professor Donkin makes out this point. "From the only rational point of view," he says, "that of scientific scepticism, and, therefore, with total disregard of the personal factor, this consideration seems in no way to invalidate the line of comment here taken. It is not clear to how many of the three observers the pronoun 'we' in the passage [above] refers, but, at any rate, we miss entirely in the paper any specific quotation of results obtained in the latter set of circumstances. But even if this evidence had been forthcoming, no mere *ipse dixit* on such a matter could for one moment be admitted. Reason would require us to entertain the great probability of mental bias in some, at least, of the observers, or to discredit the accuracy of their memory, rather than to allow that anything has been adduced in this account of what (to say the least) must be regarded as superficially-conducted experiments, to warrant a recognition of any novelty, or by consequence to stand in need of explanation by a theory of 'brain-waves.'"

The spirit of extreme caution here indicated is altogether sound; the objection to novelty, as such, is as entirely unsound. *Nothing* could prove that mind acts on mind if Professor Donkin's principle were accepted in its full extent. The theory might be established so far as he himself was concerned, by an experience of his own, but no one else would be bound to accept it, and it cannot possibly be proved to each person separately and individually.

Professor Donkin seems unaware of the fact that Dr. Carpenter, who has dealt with such subjects more closely perhaps than any living man of science, and always from the sceptical side, admits all that, as I conceive, even Professor Barrett and his colleagues consider proved. In the following passage the reader will note the distinction between what Dr. Carpenter has been led to suspect, and what he regards as beyond question:—

"Everyone who admits that 'there are more things in heaven and earth than are dreamt of in our philosophy,' will be wise in maintaining a 'reserve of possibility' as to phenomena which are not altogether *opposed* to the laws of physics or physiology, but rather *transcend* them. Some of my own experiences have led me to suspect that the power of intuitively perceiving what is passing in the mind of another, which has been designated as 'thought-reading,' may, like certain forms of sense perception, be extraordinarily exalted by that entire concentration of the attention which is characteristic of the states we have been considering. There can be no question that this divining power is naturally possessed in a very

remarkable degree by certain individuals, and that it may be greatly improved by cultivation. So far, however, as we are acquainted with the conditions of its exercise, it seems to depend upon the unconscious interpretation of indications (many of them indefinable) furnished by the expressions of the countenance, by style of conversation, and by various involuntary movements; that interpretation, however, going, in many instances, far beyond what can have been learned by experience as to the meaning of such indications."* "Looking at nerve force as a special form of physical energy, it may be deemed not altogether incredible that it should exert itself from a distance, so as to bring the brain of one person into direct dynamical communication with that of another, without the intermediation, either of verbal language, or of movements of expression. A large amount of evidence, sifted with the utmost care, would be needed to establish even a probability of such communication. But would any man of science have a right to say that it is *impossible*?"—*Knowledge*.

ARABI PASHA.

A PHRENOLOGICAL ESTIMATE.

The likeness of Arabi Pasha, as given in the *Illustrated London News* of June 10, indicates a most powerful man. His broad shoulders, deep chest, large neck, powerfully joined to the body and head; his large face, well defined, with high cheek bones, powerful nose, with broad nostrils, full round vital chin, with a powerful jaw, joined to a cold, fierce, determined look, perfectly self-possessed, as though it would say "nothing shall hinder me from accomplishing my ends," all in harmony with a large, heavy, broad base of the brain, and every indication of a healthy organization, and a powerful constitution. In fact the word *power* is written in everything that can be seen in the picture. His great base of brain means force, push, hardihood, power of endurance, and severity of disposition, if needful to accomplish his ends. His head is broad above Alimentiveness and Destructiveness, indicating large Acquisitiveness and Secretiveness, helping powerfully to swell the amount of motive power and strength of desire to gain his ends by strength or strategy. All his perceptive faculties are very prominent. He readily acquires all kinds

* Dr. Carpenter then mentions some very curious examples related in the autobiography of Henrich Zschokke, who (according to his own statement) possessed this power in a very remarkable degree, frequently being able to describe, not only the general course, but even many particulars, of the past life of a person whom he saw for the first time, and of whose history he knew nothing whatever.

of information. He quickly sees the whole situation, and is readily posted up as to what is going on around him. He can carry in his head and attend to a great variety of business at once. As a military man, he has first-rate practical judgment, and knows how to select good situations for strength or advantage, or make the most out of a poor one. Form and Size are very large, as indicated by the width between the eyes and fulness in the corner. His mechanical perceptions are correct, as well as his judgment of distances and memory of places. Eventuality, Comparison, and Intuition are large. He can remember all past experiences, and keep himself posted up as to what is going on. He is very quick to see all the bearings and relations of things, to see the application of a principle, and to make the most of what knowledge he has. He may not deal with first principles, but he has a wonderful power of applying principles that are understood, and is very quick to take a hint, and learns much from a little. He is a shrewd judge of human nature and of character. All these powers joined to large Constructiveness, as appears in the fulness of the temples, give him great availability of talent. As a head man, without anyone to control him, and with the means to carry out his plans, he is a power not to be despised. He is every inch a soldier, and is in his element when he is in the midst of the thickest of the fight, or superintending vigorous action. Such an organization would not allow anything to stand in his way. Having his country and his religion in view, his moral brain—what he may have of it—would impel him all the more and make him all the more zealous and patriotic for his own people, country, and religion. He has all the make up of organization and the physiognomical expression of great powers of determination and self-reliance. He has a predominance of the vital and motive temperaments, which mean executive work done with force and despatch.

EDUCATION.

[THIRD ARTICLE.]

It is very important that those interested in the education of the young should have a clear perception of the task placed before them, for if they have not a definite idea of the end to which they are directing their course, they will hardly be likely to take the shortest and surest way to attain that end. Now there is no error which both teachers and parents are more liable to make, than that of thinking that education

consists merely in giving instruction. Instruction is the imparting of knowledge ; whereas, by education, as I have shown in a previous article, is meant the due and harmonious development of all our faculties—physical, moral, and intellectual. Education is an end in itself ; instruction is but a means to that end.

The task, then, which both parents and teachers have before them is, firstly and chiefly, education. The work begins at home ; and, in a good home, it is carried on very thoroughly, and with immense advantage to those who are its objects. At school it is, or should be, carried on to a greater length, and more methodically ; the home still, however, continuing its share in the task ; until, by the time that the youth leaves school to take his part in the busy world, he is able to continue the task of his further education himself.

Another common error, closely allied to the one already mentioned—in fact, another form of the same error—is to regard school merely as an institution in which a child is prepared for his future business or occupation in life. This is taking an altogether too narrow view of the work of the school. The school should prepare the pupil not for any special mode of life, or occupation in life, but for the duties and responsibilities of life in general, so that wherever and however he may be placed, he may be able to do his part wisely, prudently, and energetically. Of course there must come a time, sooner or later, when this general education must give way to that special training which shall fit the youth for his future occupation ; and with the majority this time comes perhaps too soon. This training, however, in the case of those intended for the mechanical and industrial arts, is given in the workshop, the factory, or the warehouse ; and, in the case of those intended for the learned profession, it is given in institutions which have this special training in view, and only when the ordinary school course has been completed.

It is certainly true that, when this period of special training arrives, the youth has already learned to read, to write, to cast accounts, and various other things, which are generally very necessary to him with reference to his future occupation, and which, in many cases, form part of the special training required by him. This, however, is only *per accidens*, as it were. These subjects are taught, primarily and chiefly, because of their intrinsic value as means of education ; and the fact that they are accomplishments so useful, nay, so necessary, in themselves, is but an additional reason for choosing them in preference to other subjects as the means of education.

It is, doubtless, from the intrinsic utility of these arts, that

the confusion in people's ideas with reference to education and instruction has arisen. We see how advantageous it is to be able to read, and write, and cast accounts ; we see that they who have obtained these and other acquirements most thoroughly, are, generally speaking, the most successful in life ; and hence we are apt to conclude, that skill in these things is the end sought, losing sight of the fact, that this greater skill implies, almost always, a more perfect intellectual development, and so, a greater force and energy of character. But that mere knowledge or learning does not make the successful man, we may see every day of our lives. Who are the most prominent men in politics, in commerce, in every sphere of life ? Are they those who have heaped up learning for its own sake, those who have read many books, and acquired many languages ? We know they are not, but that they are either men naturally endowed with gifts of a very high order, or men of perhaps less natural talent, but whose faculties have been highly developed by a wisely-directed education.

What part then, it may be asked, does instruction play in the art of education ? Instruction is to the mind what food is to the body, that is, as the food, when digested, nourishes the body of the child, becoming part and parcel of its substance, and thus furthering its due growth and development, so instruction, when received into the mind, and intelligently acted upon by it, becomes the means of the mind's growth and development—that is, of its education. To trace this process of intellectual digestion and assimilation would be an interesting study, but the subject is too wide to be entered upon here ; I will therefore endeavour to make my meaning clear by one or two illustrations.

You enter a gymnasium, and listen for a time to the directions of the teacher, or carefully watch the proceedings of the gymnasts. In a short time you may become perfectly acquainted with the various means employed in furthering the development of the muscular powers. This is instruction. But of what use will it be to you, unless you set yourself to work and try to perform the various exercises ? You may know the means perfectly, but unless you practise them your muscles will be neither stronger nor more elastic for the knowledge. It is the putting in practice the instructions, the continuous trying to perform the exercises, that strengthens and develops the physical powers ; and this only is education.

Again, you teach a child his catechism. He can answer every question in the book, and so has received complete instruction as to his duty to God, to himself, and to his

fellows. But of what use is all this, if he has not been trained to *do* what the catechism teaches? You may inform a child that it is wrong to tell an untruth, and the child may give some sort of assent to the assertion, and may remember it. This, however, is not education. But make a child *feel* that a lie is blamable, and that telling the truth is praiseworthy, by your own example, and by your conduct to himself and others; let him feel, for instance, that he loses your esteem by telling an untruth, and regains it by resisting the temptation to do so; and then, when by these and other means you have formed in the child a *habit* of truthfulness, you may say that you have well educated him in this point.

And so it is with intellectual education. The instruction we give, is given primarily as the *means* of education, as *pabulum* for the mind's growth and development, and only secondarily for its bearing upon his future occupation, or for its intrinsic value.

While insisting upon this point, however, we shall not be thought to undervalue the instruction which we give, if it is remembered that we cannot educate without giving instruction—that instruction is our chief instrument in our task; but it is only by clearly understanding the relation which the one bears to the other that we can rightly do our work as educators of the young.

In carrying out this work, again, though bearing in mind that education in its widest and most general sense is our foremost task, we do not forget that we can, to a very considerable extent, in many, nay, in almost all cases, do this by means of studies, which are valuable for their bearings upon the future occupation of the pupil. When the time allotted to the work of education is so short, it would be folly to neglect so important a fact; and, in reality, in all schools a greater or less effort is made to economize the time and powers of the pupil by utilizing, as much as possible, as means of education, those subjects, the knowledge of which will be of importance to him in his future occupation. J. A. S.

WE have before us a copy of Mr. Wm. M'Dowall's work, "The Mind in the Face," and can heartily recommend it to those who are interested in the study of physiognomy. The subject is treated in a broad and philosophical spirit; and, incidentally, much valuable information on a variety of matters is imparted. The book, too, is nicely illustrated, and, even to those seeking only entertainment, cannot but afford the means of spending many a pleasant half-hour.

PEACOCK FEATHERS.

CHAPTER III.

Mr. Carey pushed up his spectacles. "I declare!" he said; "this is more than we expected." He had just read aloud a letter from his wife, in which she announced that she would be home the next day, and that her mother, much better in health, would accompany her.

"I am so glad!" cried Cecil.

Cecil liked her grandmother, who was a dear old lady, fond of telling stories of the glories of the family. In the excitement of getting ready for her visit, she did not once think of the gold beads. A new peacock brush stood sedately in the corner, and somehow she felt very comfortable. She should have some money Christmas-time, and by dint of a squeeze here and a pinch there she felt sure of getting the required amount some time. But Cecil did not allow for accidents. None of us are apt to.

It was the Sunday after her mother reached home. They were all getting ready for church. Cecil, pretty as a pink in her rose-coloured muslin, stepped into her mother's room. Her grandmother, all in gray, with a big prayer-book, and a parasol severely furled, had been waiting half an hour. Mrs. Carey was pinning some new strings to her bonnet; and just to fill up the time—so Cecil thought—the grandmother said,

"Suppose you wear your gold beads, Cecil?"

Cecil gave a start, and turned the colour of a fine peony.

"Not that I approve of finery," said the dear old lady, "for it doesn't make so much difference what a girl *wears* so long as her manners and back hair are nice."

Cecil could not but smile. She felt so confident of her manners and her back hair.

"But in wearing a family ornament," continued the grandmother, "there is nothing unbecoming, especially when it is a thing of so much character as the gold bead necklace. Why, my mother had that from *her* mother, and it was given to her on her eighteenth birthday as a reward for saving the whole family, by her presence of mind, from an Indian chieftain who demanded his supper, and meant to have their blood."

Cecil knew this story only too well; but it seemed to her she had never fully appreciated that necklace. Her heart beat like a trip-hammer. She gave herself up for lost.

"Put on the beads, dear," said her mother.

The moment had come. "I haven't them," she said, in a dying voice.

There was an awful pause.

"I *knew* there was something on her mind," said Cecil's mother. "You have lost those beads."

Cecil hung her head.

"Was it at the tableaux?"

"Yes," she cried, with a nervous sob; "but for the tableaux I should have those beads to-day."

I give you my word, dear young people, that Cecil in saying this did not mean to be a wicked little story-teller; she had almost opened her mouth to tell all about the affair, when Mr. Carey came into the room, looking, as usual, as if his thoughts were a thousand miles away.

"Oh, John! John!" cried Mrs. Carey, in tears, "Cecil lost mother's beads at those foolish tableaux."

"What! what! what!" said Mr. Carey, sternly.

"I knew that she would get into some awful mischief," said her mother, "and *you*, John, are to blame for letting her take part in such nonsense, and then not taking care of her properly."

"Why did not you tell me at the time?" asked Mr. Carey, turning to Cecil.

"I *couldn't*," sobbed poor Cecil, feeling that she should choke.

"And so," said her father, gravely, "it is not merely gross carelessness of which you were guilty, but cowardly deceit. I knew you to be wilful, heedless, mischievous; but I thought you knew what *honour* meant."

At the tone, so cold, so stern, Cecil burst into an agony of tears.

"I am perfectly upset," moaned the grandmother, untying her bonnet. "I can't go to church to-day."

"Go to your room, Cecil," said Mr. Carey, "and remain there for the rest of the day."

Cecil fled, and with her face buried in her pillow, cried herself into a blinding headache. To confess now seemed doubly impossible. Her father, who hated deception—what would he say if he knew all? What punishment would be hers? But what should she do? Some dim idea crossed her brain of going to Aunt Sinii, and persuading her to say that she had found the beads. So one sin was leading on fast to another. But Cecil was growing so reckless and desperate as not to care. Her vanity was humbled by the hard words from her father, and she felt anything was better than to go through such another scene. Poor Cecil! she is dreadfully naughty; but who can help pitying her a little? She appeared so pale and wretched the next day that they all forbore further re-

proaches ; but their kindness seemed to hurt her even more than their harshness. If she only dared tell all ! But from day to day that seemed more impossible.

A week passed. Cecil missed her lessons at school, shunned her companions, and at home was no longer the gay, bright girl that they all loved so fondly in spite of her faults. It was too heavy a burden for those young shoulders, and no wonder she pined under it.

CHAPTER IV.

Finally, something happened. Her father came in one day just as they were ready to sit down to dinner, and walked up to Cecil.

"Come, little girl," he said brightly, "look up, smile again ; get back your roses."

Cecil started as he patted her shoulder.

"What is it, father ?"

He tossed a little package on the table. The grandmother seized it. Out tumbled the gold beads !

Cecil turned as white as her linen collar. What—what was the meaning of this ? What new terror must she endure ?

Mr. Carey rubbed his hands, and seemed to enjoy the delight and amazement of Mrs. Carey and her mother.

"As soon as I knew the beads were gone," he said, "of course I began to look out for them. I heard there were a lot of shiftless darkies at Witherington's the night of the tableaux, so I hired a fellow to keep an eye on our coloured population. Last night at the negro church he saw old Sinii Hubbard *with the beads on !* He arrested her on the spot."

"And she is in jail ?" asked Cecil, faintly.

"Oh yes, indeed ; locked up safely."

"What did she say ?"

"Why, I believe she declared that she *found* the beads, and asked to see Cecil," said Mr. Carey, laughing.

Poor Cecil again ! in what a dreadful perplexity she found herself now ! A sort of numbness paralyzed her brain. It refused to act. Only one thing seemed clear, that she must see Aunt Sinii.

After school she turned her steps toward the jail. What a direction for Cecil Carey's steps to take ! A high wall surrounded it. Who knew what horrors lay beyond ? She rang the bell, and the jailer's wife came to the gate—a cozy little red-haired woman, whom Cecil had often seen at church. The young girl felt reassured at sight of her beaming freckled face,

and still more by the laughter of her children at play under the very shadow of the grated windows.

"Good afternoon, Mrs. Jones," she said, trying to appear at ease. "I should like to see Aunt Sinii."

"Well! well! well! to think that you should come to see the old witch-woman! you're the first, and the last, I reckon."

"I suppose there is no objection?"

"Objection? Bless you, no. Come right in, and see Mr. Jones."

Mr. Jones was smoking a comfortable pipe, which he laid aside when Cecil came in. He was a slow man, never taken by surprise; and he only said, as he took down the great bunch of keys, "s'pose you know that you'll have to be locked in?"

"I don't mind," said Cecil, too miserable, in fact, to mind anything. "She won't eat me."

"I reckon pa had better stay in the room with you, miss," said Mrs. Jones; "for they do say she's a witch sho' 'nuff."

"No, no," cried Cecil, blushing deeply; "I'd rather see her alone."

Mrs. Jones wondered in her soul what was up now, but "pa" led the way impassively.

Cecil was in a high state of excitement. She trembled like a leaf as she walked along the narrow corridor. To be a Juno had led to more—far more—than she looked for.

Aunt Sinii was bundled up in the little cot bed, and looked for all the world like a bug in a rug. The cover was drawn up to her chin, and only her long black head was visible, decorated with a black handkerchief tied in four sharp points. Her black eyes winked and snapped in her little puckered face, and as far as looks went she was all of a witch.

"Yer's a visitor," announced Mr. Jones.

"Howdy do?" said Aunt Sinii, very chirpily for a prisoner.

Mr. Jones withdrew, and Cecil was locked in with her "victim," as she remorsefully called the old woman.

"Take a cheer," said the victim.

There was but one in the room, a cane chair with no bottom, but Cecil balanced herself on it's edges, and cried, "Oh, Aunt Sinii!" in a doleful voice.

Aunt Sinii's withered features blossomed into a smile. Apparently there was something cheerful in Cecil's distress.

"I don't know what to say to you," sobbed Cecil. "Why did you not say at once that I gave you the beads?"

"Humph! I expected a thank you for holdin' my tongue."

"I *do* thank you; I do, indeed. I think you are so good and noble for not telling. But oh! I have been so wicked myself that I am just wild with the sorrow of it all."

"Now, honey, don't you worry—"

"To see you here, in prison, and for me—"

"As fur prison," interrupted Aunt Sinii, "dar's many a thing as goes by a bad name as tastes better'n it sounds. Dey makes me comf'table hyer, an' it's been yers an' yers sence I've had my meals so regiler—not sence I lived wid my ol' mars' in Carliny. As fur de beads, of co'se I'll stick to it dat I *found* 'em. An' even if dey convicts me for stealin' 'em"—Cecil shuddered—"why, dey can't do nothin' more'n clap me in jail fur a while."

"But that must not be. It would be an awful crime; worse than anything I've done yet."

"Don't you be foolish, Cecil Carey," growled Aunt Sinii, who had formed her own plan about a good pile of money out of this affair.

"There is this way," said Cecil. "Of course, I shall not let you stay in jail and suffer for me; but as the beads were mine, I can persuade father not to prosecute—that's what I think it is called—and you will be released at once."

"An' how 'bout dat ten dollars you owes me?"

"You know I will pay you just as soon as I can."

"An' how much fur holdin' my peace 'bout de whole business? An' how much damages fur dis onrighteous imprisonment?"

"Good Gracious, Aunt Sinii! do you think I am made of money?"

"Reckon your pa is. Dat's all de same. Plenty o' ways o' gittin' your han's in his pockets."

Cecil sprang up and looked wildly at Aunt Sinii, who chuckled like the evil old witch she was.

"*Are you proposing to me to steal my papa's money?*" she cried.

"Hi! don't be so airy, Miss Flyout! You ain't none too good, I reckon, wid yo' peacock feathers, an' yo' gold beads, an' yo' miserbul way o' treatin' a frien'less ol' nigger lady like me."

Cecil felt as if she should like to whip the "frien'less ole nigger lady."

"You shall leave the prison to-day," she said, with an effort at dignity. "I will tell all—"

"An' so will I," shrieked Aunt Sinii. "I'll tell on you all over dis town. An' if you don't pay me dat ten dollars, I'll clap you inter jail—I will, I will—"

"What is all this about?" said a grave voice.

They had not heard the key turn in the rusty lock, but there stood Mr. Carey in the doorway, with the jailer behind him.

Some busybody had informed Mr. Carey half an hour

before of having seen Cecil walking in the direction of the jail. He had started after her, and had heard Aunt Sinii's last outburst.

"Will you explain, Cecil?"

But she could not. She had given way, after the long strain, and was weeping too convulsively to speak. But Aunt Sinii was equal to the occasion. She let fall the bed-coverings, and with frantic gestures of her skinny arms poured forth the story.

"This is true, Cecil?" said Mr. Carey.

She made an affirmative gesture.

"You must let your prisoner go, Mr. Jones; and as for the fly-brush"—turning to Aunt Sinii—"ten dollars; I don't know. I shall have it valued, and you shall be paid its full value—no more, no less. Now, Mr. Jones, will you send for a carriage?"

Half dazed, Cecil found herself in the carriage, and her father's protecting arm about her. Ah, that tender touch! It was almost more than she could bear. How could she have been so afraid of her father? After she had grown composed, he heard the whole story from her lips.

"My poor little Canary-Bird," he said, softly stroking her hair.

He sent her to her room on reaching home, and himself explained all to the mother and grandmother; so there was no other ordeal in store for our storm-tossed and subdued bird.

Three days latter she came to her father with a shy, little repentant face.

"Father, you know I was to have a new hat this summer."

"A new hat? Yes."

"Well, won't you take that money and pay Aunt Sinii? I will wear my old one. It will do me good. I *ought* to be punished."

"You *have* been, my daughter," said her father, kissing her; "still, your idea is a good one, and if you like, we will settle it that way."

She *did* wear the old hat all the summer long; but, by way of ornament, she stuck a shining peacock feather into one side. It did not match her dresses, and the girls wondered at it. They never guessed all the significance of that Iris eye to the pretty girl on whose head it danced.

A NOBLE heart will disdain to subsist, like a drone, upon other's labours; like a vermin, to filch his food out of the public granaries; or, like a shark, to prey upon the lesser fry.—*Barrow*.

Poetry.

UP AND DOING.

Pluck your roses while they blow—
 Yesterday is done ;
 Let no hour unfruitful flow—
 Time is passing on.

For enjoyment or for toil
 Is to-day or none ;
 To-morrow all your plans may foil—
 Time is passing on.

Tide's neglected good to do,
 We regret when gone ;
 Speedy act is my advice—
 Time is passing on.

GLEIM.

THE GHOST'S GREETING.

High on an ancient tower stood
 A noble hero's ghost,
 Who, as the vessel sailed by,
 Said farewell to its host.

“ Behold, these sinews were as strong,
 This heart as stout and wild,
 These bones as full of hero pith,
 As full my beaker smiled ;

“ One half my life I stormèd forth,
 One half I spent in rest ;
 And such, thou mortal vessel, thou
 Must ever be thy gest.”

GOETHE.

THERE is no allurements of vanity so powerful as that which finds its vent in vain show. Whether the riches be of the purse or of the person, the ostentatious exhibition of them must ever be a troublesome, harassing, and vexatious task, fruitful in disappointments, leading to future years of regret for time wasted and talent misapplied. For, as time unrelentingly flies, the riches of personal beauty slowly but surely fade away—the riches of the purse may increase ; but as the sower of the seed knows not who shall reap the harvest, so he that heapeth up riches knows not who shall gather them, or whether the squanderer and the spoiler shall not in a short time scatter the life-accumulated hoard.—*H. Crathern.*

Facts and Gossip.

“PROGRESS” is the title of a new work by Mr. James Platt, whose books on “Business,” “Morality,” “Money,” “Life,” and “Economy,” are so well and so deservedly known. Mr. Platt takes for one of his mottoes the saying of Mr. Gladstone, “What we have most to desire is to make our countrymen think”; and the whole aim and effort of his book is to show what is meant by true progress, and to point out the best means of attaining it. “Progress,” he says, “means to toil and study, to nourish the mind and heart with pure and patriotic aims, using your power to clasp together the hands that have smitten, the hearts that have been estranged—to teach men by your own success what a man can do.” The author shows that success is attained by a proper exercise of the faculties of Causality and Acquisitiveness, due regard, of course, being had to the higher faculties. We can heartily recommend “Progress” to the attention of young men, especially to those who have chosen the sphere of business.

Correspondence.

THE LEADER OF THE BLUE RIBBON ARMY.

To the Editor of THE PHRENOLOGICAL MAGAZINE.

Sir,—We have had in Doncaster R. T. Booth (of the Blue Ribbon Army), and as he is a very popular man with many people, a rough sketch of his phrenology may be interesting to the readers of the MAGAZINE. He has an excitable temperament—what is known as mental-motive, a tough sallow skin, brown hair, and a slender build of body. His head is rather short behind, but wide, indicating small Philoprogenitiveness, but large Friendship, Conjugalitv, and Combativeness. He has also large Cautiousness, Approbativeness, and very large Firmness and Veneration, with full Benevolence, Hope, Spirituality, and Imitation, which make up a large moral region, and gives that anxiety and determination to do what he can to make men sober. With a college training he would have used more of his reasoning brain and less of the emotional when appealing to his hearers. The perceptive and reflective portions of the brain have not had in youth that culture necessary to their full development, although he has naturally a good frontal lobe. Causality, Locality, and Agreeableness are large; Comparison, small; Constructiveness, Number, Order, Form, full. He also possesses a prominent eye, which bears out the phrenological teaching, viz., that the full eye indicates verbal memory.

JOHN FURNIVALL.

Doncaster, July 17th.

THE

Phrenological Magazine.

SEPTEMBER, 1882.

THE QUEEN.



EVERYBODY is supposed to know something about the Queen, yet few have been behind the scenes to know the private life and character of Her Majesty. Some are so situated and so organized as to show two distinct characters, a public and a private one.

The Queen is obliged to act the queen, and represent the character of a queen, and yet she has a very extensive household and family to be at the head of, and to be responsible for, which requires her to act accordingly. She also has vast estates, various kinds of property, and many palaces, castles, and families to look after, requiring certain qualities of mind in order to discharge those duties properly. Besides, she has her own particular qualities of mind that dispose her to act accordingly, independently of her varied relationship to others.

It is this last private, personal character, which is the result of her organization, that we wish to describe. The head of Her Majesty is of full size, and the brain is fully developed in all its parts. Her brain, moreover, is well sustained by a strong vital organization, indicating a strong hold on life. Her vital organization is specially developed, as shown by her rotund form, large face, neck, and base of brain. She has strong digestive powers, and can enjoy the good things of the table, yet may prefer simple and nourishing kinds of food to those of a more elaborate and concentrated kind. There is a harmonious relationship between her natural appetite and her digestive powers, for both appear to be distinctly developed. Her lungs appear to be large and ample, the heart is large, and the arterial system is amply represented; her muscular system is not predominant, and is only kept in a good condition by much change and exercise. This natural deficiency is hereditary, and leaves the mind without that support that is necessary. Her muscular system acts with force, but irregularly. The same is true of her nervous

system and mind. Her nervous force is not a predominating power, and, although vigorous at times, yet there is not a superabundance in stock. The vital organization is superior, and has the ascendancy, and will add length to her days.

The shape of the brain is elliptical, being well rounded out and fully developed in all parts, indicating general culture. The base of the brain is specially developed. All the faculties that are connected with physical existence, with the capacity to enjoy and protect life, and to provide for the wants of life are well represented. She has a strong, energetic disposition, with much force of character, and strong likes and dislikes, as indicated by the breadth of the head at the base between the ears. The head continues wide upwards, indicating great industry, economy, reticence, cautiousness, guardedness, and forethought. She is well organized to acquire, save, and take care of property, whether she have much or little. She naturally confides in but few, and not in them till they have been tried and proved to be true. The domestic brain is strongly marked, and has a powerful influence on her whole character. Her head being large and broad in the occipital portion indicates strong love as a wife and parent. The development of her brain in the affections is in perfect harmony with what all know to be true in her life and character. As a companion she was devotedly attached, and few with the strong impulsive love-nature that she has have lived so discreet a life as she has, thus setting a most noble example of virtue and fidelity to all the women of her realm. She manifests great interest in children, both as a parent and towards the young generally.

She is fully developed in the crown of the head, giving dignity, sense of character, and ambition. Her position greatly facilitates the action of Self-esteem and Approbateness, and their action with Cautiousness and Secretiveness may render her more distant and reserved than is necessary. Her imperativeness would be called out by her position and her relation to others even if she had but a moderate tendency that way. The uncertainty of her position as the world now goes would be a sufficient cause to stimulate her to economy and reticence.

The moral brain is large. The head is full in the coronal portion, and it rounds out into the climax organ, Veneration. That being the largest moral organ, her strongest moral feeling is the consciousness of a supreme creating power giving her religious emotion, tendency to worship, and regard for the ceremonies of religion. Spirituality is also large. She is capable of being much interested in subjects of a spiritual

nature, and is disposed to think much about spirit life and influence. Hope is not so large or influential; more of it would be a decided advantage to her. Benevolence in connection with Friendship is strongly manifested, and has a marked influence, yet it is well balanced by her conservative qualities.

The organ of Firmness is large and active. What she has determined in her mind to do, that she will do, and does not know why there should be any superior obstacle in the way to prevent. Energy, determination, and self-interest combined form a very strong power in her character. So also



her affections and family ties, joined to her integrity and sense of virtue, form another strong element in her character. Her head is broad in the temples, indicating versatility of talent, ingenuity, taste, love of art, and sense of perfection.

The forehead is well rounded out and full in the centre, which indicates good powers of observation, good general memory, and consciousness of what is going on. Her three strongest qualities of the intellect are Language, Order, and Comparison. She has a full command of Language, and is equal to the occasion when necessary to express herself; can learn and talk the languages, and remember verbally quite

well. Comparison, being large, gives her great power of criticism and association of ideas, and she is quick to see the fitness and application of ideas and principles. She is sharp in discerning character and the motives of strangers, and is sufficiently suspicious to be guarded about committing herself. Her talents are of the practical, available, intuitive kind, rather than of the theoretical, inventive, or speculative kind. Order being large has a powerful influence when combined with the executive brain, rendering her very exact, prompt, and particular in all her household and business arrangements. Being thus very particular, she would as far as possible, take much of the arrangement of affairs into her own hands, and superintend their execution even into the details; and with her large Time, Conscientiousness, and Firmness, would see to it that each one discharged his or her duty accurately and punctually.

The character of the Queen is undoubtedly much affected by her associations, and by the high position she has held so long and so worthily; hence this description may not be in harmony with some peculiarities of her character brought out by surrounding influences; I have, however, endeavoured in my analysis to be governed by the indications given in the form of the head without, perhaps, taking sufficiently into account hereditary bias. Still the salient features must show themselves, and not all the surrounding influences in the world would tend to make her much different to what I have portrayed her. Her character has doubtless had a great deal to do with the prosperity of her reign, and it is to be hoped that she may yet be long spared to watch over the interests of her country.

L. N. F.

MAN AS A SOCIAL BEING.

By organization, man is adapted to certain labours, duties, and responsibilities. All the labours and duties man by organization is called upon to discharge are important, but none are more important than those that make him responsible for the race, and for established society. Man has a variety of relations to sustain in connection with his social nature, based upon the individual faculties of that part of the brain that has to do with his social instincts.

The first and fundamental faculty or function of the social brain is Amativeness, located in the lower and lateral portion of the cerebellum. The whole of the cerebellum is not probably allotted to this faculty.

Man exists as male and female by an arrangement of nature,

in order that he may be the agent of his race, and the faculty of Amativeness gives a mental and physical attraction between the sexes as such, and produces physical, passionate, sexual love, draws the sexes together, and leads the one to appreciate the other in proportion as this power, mentally and physically, is apparent. The sexes appreciate each other more in the prime of life than at any other period. The power of this faculty depends on the strength of the constitution, the warmth and vitality of the blood, and the healthy secretions. The mind, in connection with the brain and nervous system, gives the inclination and susceptibility to love.

In its action there is life and heat. Along with a perfect form in full development, connected with a refined tone of mind, its influence is most powerful and attractive.

It is at the foundation of attraction between the sexes, and the more there is of it under control the more attractive is the individual to the opposite sex. It is the centre of magnetic force and life-giving power. Where there is the most of it there is the most life, heat, and magnetism. It is stronger in the masculine than in the feminine organism. The masculine possesses the positive, and woman the negative quality.

According to the order of nature the influence of Amativeness begins to be felt and manifested at the age of puberty, and afterwards into declining years. There may be mental conceptions and inclinations before and after, but not generative ability. It generates physical life and force, while the nerves of the cerebrum generate mental force and establish the moral character. As it is life-giving, its stimulating influence with the whole mind is very great for either good or evil.

The young receive very little proper instruction how to regulate or control this faculty, either from parents, teachers, or others, but are often left to the control of morbid desires, cultivated by reading unhealthy novels and books of a sensual character, calculated to awaken this faculty prematurely; besides, the food of the young is very liable to heat and stimulate the blood. All excessive action of the faculty tends to weaken, debilitate, and prematurely exhaust the whole system; while its perversion tends to sensuality and demoralisation of the whole man.

Parental Love is the next social faculty in importance. It gives desire for and love of offspring, and fondness for children, or, in their stead, pets and animals of some kind.

At maturity, most people true to themselves desire to become parents, and begin to cast about for a mate in order to consummate that desire. Children are placed in the hands

of parents in a perfectly helpless condition, and nothing but strong, devoted, and constant love to the little helpless creatures could avail to supply their wants during the long years of their infancy. Fortunately the faculty is the most active when the child is the youngest and most dependent. The young mother thinks she must not leave the child for a moment, and everything else must give way for the little one.

All who have the faculty cannot gratify it as parents for various reasons. Some, with the organ inactive, marry but avoid offspring; such are not true to the real object of marriage; or, having children, they do not love them sufficiently to properly care for them. One of the great sins of mankind is thoughtlessness in parenting children, and carelessness in caring for and training them. It is an exception to the general rule where they are properly cared for physically and mentally. Parents have no business more important than to train their children in the way they should go.

No class of people in society are more responsible than parents. They do not relieve themselves of responsibility when, as soon as they are born, or, as soon as possible after, they place them in the hands of hirelings to care for them.

If it will pay commercially for farmers to use the right means to improve and take care of their stock, it certainly will pay physically, socially, intellectually, morally, and in every other way, for parents to make proper selection of partners in the first place, make proper preparations to parent children in the second place, and to properly cleanse, feed, train, and guide their children in the third place, according to their conditions and wants, especially where there is only one son, and that son is comparatively delicate and precocious. I once examined the head of an only son, three years old, and found him over nervous, delicate, out of proportion, having too much brain for his body, over active, and very wakeful and precocious, and had all the indications of becoming shortlived, or of living a fast life and spending his father's money with a free hand. I gave the father full written instructions, along with the comparative size of the organs, and he made a special study of the boy and my delineation of him, and set himself earnestly to work to rectify his defects, and restrain his excesses, and although it took years of close study, and watching, and constant attention, yet by so doing he has brought about a radical change in the boy, for he is now strong, healthy, industrious, economical, and shows shrewdness, caution, and forethought. Very few fathers, full of business, would give so much time as he has, and still continues to do. Instead of sending him

to school he teaches him himself, and in the end it will pay a hundredfold, for by this early care and training he saves the boy, his only son.

Another father, very fond of children, left his first born and only son to the care of others ; early sent him away to school to get him out of the way ; and before he was eighteen he had gone into all the excesses of fast young men, smoking, drinking, taking money without consent, imprudent in love matters, and generally dissolute.

Parents should make up their minds beforehand what kind of children they want, and carefully cultivate the qualities they desire in their offspring, for children partake of the most active powers of their parents at the time of their conception. The least active functions and organs of the parents are the least developed in children. Drunken, demoralized parents, or those who are insane and idiotic, or bordering that way, are very liable to have very imperfect children. Mothers are more liable to give consumptive and insane tendencies ; while fathers will more frequently give idiotic tendencies. The more perfectly organized and developed, and morally and intellectually disposed the parents are, the more perfect the offspring.

Amatory love and desire to become parents draw the sexes together, which brings into exercise another faculty, that of Conjugal love, which gives a mental appreciation, a constancy of attachment, a desire to marry, to become one in every respect, and enjoy and labour together, and have all things in common. It leads to one permanent, constant love at a time, and for ever if possible.

The faculty is stronger in woman than in man, while amatory passion is stronger in man than in woman.

Conjugal love was discovered by Dr. Vimont, of Paris. He found, in dissecting the brains of animals and birds, that those that mated to raise their young had a development of brain on each side of Love of Offspring and below Friendship, which those animals and birds that do not mate had not got. He called it Union for Life. For various reasons we have changed the name to Conjugal love, for it is the basis of conjugal love, and gives constancy and continued union. That portion of the organ adjoining Love of Young gives a desire to unite in marriage, while that portion joined to Combative-ness gives constancy.

Persons marry in whom the organ is small, and they may be true to the one married so long as life lasts, but let the object of their love die, and they can easily wean themselves from their first love, and find a substitute, if necessary, several

times over. But where the organ has a controlling influence there is no departure from first love, but love in memory lasts even unto death. Many who love with the idea of marriage, but are prevented, never love again, even with many offers. They have but one love, and give that all to one and cannot transfer it. A good man who had the misfortune to lose two wives, and married the third, told me he loved all his wives, and the third one as much as the first.

Those who marry several times, and say they love the last as well as the first, or all alike, have more sympathy than conjugality. I knew of a couple who had the organ large, but so antagonistic to each other that they could not live together in peace, and were in the habit of quarrelling and separating with a vow they would never meet again, but as soon as their temper cooled off they started housekeeping together again. Said the husband to me, "We cannot live together, and we cannot live away from each other."

I once told a young but sickly wife that she was worrying herself with the idea that if she should die first her husband would love and marry someone else. She replied quite feelingly, "Well, I don't want him to love anybody else if I die first; I would never love anyone if he died first." The husband said, "She has already made me swear on my knees that I will never marry again if she dies first."

Very many illustrations might be given of the existence and characteristic action of this faculty. In wedlock it is best to have the faculty large.

The faculty of Friendship was at first called Adhesiveness, but by common consent of phrenologists it is now called Friendship. Its function is sociability, love of society, desire to come in contact with genial spirits, to help make up society, and to have to do with it; to join clubs, associations, churches, and gatherings, and to be in the midst of a social community, and exchange thoughts and feelings.

The faculty is gratified by moving into centres of population, and mixing up with others. It disposes one to make friends, to put value upon them, and make sacrifices for them, as Jonathan of old did for David. With it large persons help to make the company, to do their part in entertaining, and to be one with the rest. It gives a hearty shake of the hand with a meaning.

When inferior in development and action, persons prefer to be by themselves, to take a walk alone, and to be free from social restraints. Such persons do not care to go into company, to make calls, to join societies, clubs, &c. They may marry, but are very little company to the family, and are

annoyed if called from business, or what they may be doing, simply to entertain those they do not care for.

Friendship is becoming more and more extended in its manifestations. The circle of friends is enlarging, even nations are fraternising more than formerly. Our neighbours, instead of being next door, are on the opposite side of the globe. Our interest in the antipodes is increasing daily. We are living on and enjoying the productions of each other. Clanishness, sectarianism, and exclusiveness are more things of the past than present. It is only a matter of time when all our children go to school and play together, when bars between different classes of society will be so low as to be easily stepped over, and persons will be able to marry their strongest and purest love without so much regard to equality of wealth, position, and titles.

Let the faculty be cultivated so that all will be more social with all, and the appellation of "Brethren" will apply more extensively.

The organ is located on each side of Inhabitiveness and Continuity, on the inner or central line, and Combativeness on the opposite side, below Approbativeness and Cautiousness, and above Conjugality. The inner portion of the faculty gives family affection and attachment to kin, the outer and upper portions give gregariousness and love of society, while the lower portion gives sociability and companionship. An uncultured person with it large is liable to have strong prejudices, and show great partiality and narrowness of opinion. Much that is called Christianity comes from the action of this faculty. Politics can be much improved by the cultivation of Friendship; free schools, free libraries, free trade, and more equal exchanges, for instance.

Inhabitiveness is located in the occipital brain, on the central line, above Love of Offspring, and below Continuity. Its function gives love and consciousness of place, sense of home, desire to be located, to own land and house, love of country, and patriotism. This faculty shows itself all through creation. Everything has its special home and locality: the bird builds its nest, lays its eggs, hatches its young, and trains them all in the one home it built for that purpose. Animals have their special places of resort, and reptiles their own particular hiding-places. All peoples with the organ large are continually looking for a home until they find one, and sometimes change two or three times before they are satisfied, and when they are satisfied, they either put no fixed price on it, or so high a price that others would not give it.

Those who have this organ small have no conception of the

pleasure one experiences. When the organ is large in a man who is perfectly satisfied with his home and its surroundings, it causes him to feel that his home is more than a palace—it is his physical heaven. The soldier who is fighting for his own home and country will fight much more courageously and earnestly than the one who is only fighting for so much a month.

The lower portion of the organ gives sense and love of home and a place to live in. The upper portion gives love of country.

Continuity is located above Inhabitiveness, below Self-esteem, and by the side of the upper portion of Friendship. Its influence is rather restraining, and facilitates application and connectedness of mental action. It does not allow the mind to pass rapidly from one subject to another without a finish of the subject. It holds the mind in suspense or on the subject till there is something like maturity and a correct conclusion. With strong thinking powers it may lead to abstract thought and absent-mindedness. When it is small, with large comparison and perceptive faculties, the person is liable to come to sudden conclusions, and his opinions are more superficial than sound and reliable. When large, it helps very much to give balance of power, harmony of mental action, and reliability of mind.

Some persons have Continuity so small as to be unable to pursue a regular thorough course of study, and fail to have a disciplined mind. Care should be taken to cultivate the organ when small in the young.

This is not a domestic faculty, but because of its locality it is put into the social group.

All the organs in the back or occipital brain have a powerful influence in the general action of the mind. They serve as regulating powers, and divert the mind from extreme action in other directions. They call a man home, and give him stimulus to action and economy, as well as subjects of thought. They aid greatly to bring out the manly feelings, to give settledness of purpose and consistency of life. The existence of the race not only depends upon the domestic brain, but the establishment of society, and the formation of communities and laws to regulate them. When the occipital brain is deficient there is a weak link in the mental chain, the ideas are scattered, the mind is not balanced, the character is not established, motives for action are not reliable, and affection, friendship, and love too weak to inspire confidence. But when large and active, men will fight for home, country, friends, wife, and children, and, if necessary, make many

sacrifices for them, be proud of them, live for them, and even die for them.

It is for society that philanthropists labour and give their time and money, and those who have the strongest domestic and social feeling are foremost in these labours of love.

L. N. F.

HEREDITARY TRANSMISSIONS.

“What have I to do with posterity? What has posterity done for me?” These are words which we have often heard in good-natured banter from men who have been pressed to give for some object whose recommendation was that it would do good to future generations. But, duly pondered on, it is a grim jest. We who are now living, we who have to do with the hard and stern facts of this hard and stern world, were, not very long ago, that very unsubstantial thing known as future generations. But there is very little unsubstantial about us now. It is all solid reality. Our place and duty here on earth and the grave to which we go; our hopes, our fears, our labours and struggles, our successes and reverses, our sins and sufferings, our good and evil, our past, our present, our future—these are all realities, and to some of us very terrible realities, which were, to a great extent, determined for us before we were born. Past generations had a great deal to do with what we are and where we are to-day. Had men and women long dead, whose very names we do not know, been other than they were, it would have been far better or far worse for us.

As past generations made us, so we are forming the age that is to be. As their sins have been visited on us, so surely shall our sins be visited on those who are to follow us. This is the great and awful and yet the wise and beneficent law of the economy under which we live. It has been ordained by the Author of nature that every human being who is born into this world, the lowest as well as the highest, shall bring with him one tremendous dowry, of which he cannot divest himself, which he must use for good or evil until he ceases to be—the power of influence over others.

To one illustration of this great truth I shall confine myself.

One of the most startling convictions which early force themselves upon the student of human nature, and which grow in intensity as his observation widens, is the extraordinary extent to which life and actions are modified by what is known as the law of hereditary transmissions. Briefly and

simply expressed, that law is this, that alike in his physical, his mental, and his moral nature, the child takes after not only his immediate but his more remote progenitors. He is what they have made him. Perhaps nine-tenths, certainly more than half, of what he carries with him to the grave he brought with him to the cradle. Not merely along the great lines of his constitution, but down even to tricks of gait and gesture and manner, he takes after those who went before him. To an extent far beyond what we have any conception of, both the good and the evil that are in him came to him as an original inheritance; the good to be improved and increased, the evil to be lessened and conquered; but a mingled web of good or evil his life shall be till all ends here.

This is the great mystery of birth, the mystery of the little child. Truest and sweetest type of innocence, what enormous capabilities of blessedness or misery are already slumbering in that soft heaving breast! I seldom look upon a little child without a feeling akin to awe; and I wonder what on this and on the other side the story of that child will be.

That law of the hereditary transmission of qualities is universal throughout animated nature, and stretches back in its operation through immemorial time to the period when the fiat went forth:—"And God said, Let the earth bring forth the living creature after his kind, cattle, and creeping thing, and beast of the earth after his kind: and it was so." It is part of the scheme of nature that within certain limits the improved qualities of the individual are so far transmissible to the offspring and give them a higher starting ground, so to speak, than their fathers had in the race of life. But for this the human race would have been, to a great extent, stationary, and the amelioration of human manners, the improvement of human character, and the general march of civilization would have been much slower than even they have been. It is a most merciful provision that a healthy physical nature, whose soundness the parent has done his best to conserve and to improve by strict attention to temperance and the general laws of health, and the habits of moral purity and self-control which he has made it the object of his life to acquire, can be transmitted so far as an inheritance to those who come after him, to be a stock of health and of happiness to them and to generations yet unborn. We cannot doubt that that is partly the Divine meaning of this mysterious, subtle, and powerful law of hereditary transmission. We cannot doubt that it was meant by its Divine ordainer to be one of the most powerful factors in the happiness, the progress, and the general welfare of mankind.

But can you tell me of any beneficent law of God which man cannot or has not transmuted from a blessing to a curse? And so there is a dark and ominous and dreadful side to this beneficent law. It does not stay to pick out the good influences in man and to hand them down from generation to generation, passing by the evil, and leaving them to die. Like all laws it is inexorable, and acts on what it finds, taking up the evil as well as the good, making the wickedness of one man the curse of thousands, and visiting the sins of the fathers upon the children unto the third and fourth generation. The law does not stop because human misery is involved in its operation. No law or principle of nature does. Winds and waves, gravity and electricity, famine and pestilence, all are deaf to the cry of suffering men. Nature is as kindly to the weeds as to the corn.

Before the operations of this law in the transmission of evil, of physical disease, of mental disease, of moral disease, oftentimes of life-long bodily torture, and, far worse by many times, of almost unconquerable proclivities to evil, I simply stand in awe, dumb with mingled horror and amazement. I look back over an active life of more than a quarter of a century brought into incessant contact with human sin and with human suffering, and I deliberately declare that the most hideous spectacles of pain and degradation I have ever witnessed could, in my opinion, be traced back to hereditary influence. The physical aspect of the case is dark enough. That a poor innocent child should be born into the world with a constitution laden with disease, the life before it one prolonged pain till death comes with its merciful release, seems dreadful enough; but when an innocent child comes into the world handicapped in every way for the race of life, not only enfeebled in constitution, but enfeebled in intellect, enfeebled in will, with powerful proclivities to the wrong, and with no prospect before it but that of a waif of humanity, a miserable and worthless life, ending at last in the workhouse and in a pauper's grave, that is darker and more dreadful still. There are thousands and tens of thousands of such helpless and innocent children as worthy, as well deserving, and as dear in the sight of God as the royally born, ushered every year into a world whose sufferings they are fatally doomed not to mitigate but to multiply. There is one city in the land where thousands of such children are born every year; simply because their fathers and their mothers were the same before them, perhaps for generations back.

But it needs not to go so far as generations back. We do

not need to *suppose* the case, for it is far too common a one, of a young man with no hereditary bias whatever to the grosser forms of evil, born of good parents, well trained and educated, with every influence that could lead him to the right and deter him from the wrong, yet falling by degrees into evil company and evil ways, contracting habits of debauchery, and starting a stream of evil influence which shall taint and hurt, and, may be, ruin his descendants for several generations, a stream of evil influence which he began, and which, but for him and his doings, would never have been at all. We say—poor fellow, he is hurting nobody but himself! That is one of our social falsehoods: what about the men and the women, too, sprung from him, who, in that dreadful craving after stimulants—the most fatal, the most cruel inheritance which can fall to the lot of a human being—will be tortured all their life long because he chose to do wrong, and will have good cause to curse the day that he and they were born?

One of the peculiarities of this law is that both the moral and the physical poison sometimes skip a generation. The rule is that healthy parents have healthy children, and that well-living parents have well-living children. But it is not an uncommon thing to find that rule reversed, and to find the offspring of worthless parents turning out well, and the offspring of worthy parents turning out ill. When there is any extraordinary outbreak of vice in families where better things might have been expected, there is a strong likelihood that this aberration is traceable back to the remoter ancestors.

I spoke at the outset of a conviction which early forces itself upon the student of human nature; there is another equally startling, viz., the exceedingly slender hold which the knowledge of this law has upon the public mind, and the almost inappreciable influence which it has in directly governing human actions; that is, in directly impelling men to that line of conduct and to the formation of those habits which will be a blessing to their offspring, and in guarding against that line of conduct and the formation of those habits which will be a curse to their offspring. Here is a subtle and tremendous law, as steady, as certain in its action as the tides, and infinitely more productive of human weal or woe—a law which pursues its inexorable path, yet capable of being controlled as certainly as electricity is, and turned from destructive to beneficent ends. Here is a world of living men, themselves in so many instances the sufferers from its operations, and yet paying no heed to it whatever, and coolly handing down to unborn generations, and often in an inten-

sified form, the evils which they themselves inherited and *which ought to have ceased with them*. Among the improvements which we certainly anticipate in the future, one is greater attention to the laws of health generally, and in particular to that special branch of them now under consideration.—*Sunday Magazine*.

LECTURES ON PHRENOLOGY.

BY DR. SPURZHEIM.

LECTURE XVII.

We have spoken of phrenology in its application to several of the sciences ; I wish now to make an application of it to the medical profession. The question is whether phrenology is useful to the healing art. You will excuse me if any severe expressions escape me, because in this matter it is difficult to remain indifferent with my profession, for in the consideration of the deranged functions of the brain, we consider the most painful situation in which man can be placed ; and here I confess that the medical profession has not contributed much to confirm and propagate phrenology ; however, I shall propose to them a few motives for doing so.

1st. Do you think that phrenology is founded in nature, and that it has or will become a species of philosophical knowledge ? I should like to know whether our profession might not be interested to raise itself as high as possible. If it be ascertained that man must be studied in the same way as other beings, why neglect that part of man which is the most important, a knowledge of which is absolutely necessary if we wish to make any application of our studies to the treatment of disease ? The philosophy of mind, we have shown, must be founded on phrenology. Hitherto, physicians have consulted philosophers in the study of the mind, instead of cultivating an acquaintance with nature, as taught by phrenology. Moreover, the question is, can we remain indifferent about the functions of the brain ? Must we not know its functions in a healthy before we can treat of them in a deranged state ? We acknowledge the importance of anatomy, physiology, and pathology, and of every other part, and admit such knowledge to be necessary before we think of treating a part ; why then neglect the brain ? As to its anatomy, it has been little understood ; it has been sliced down like cheese ; its physiology or healthy functions have been unattended to ; and as to its pathology or derangements,

many of them are never thought of. Shall we go on in this way? If medical men do not feel an inclination to attend to these inquiries, let the public know what they are, and let them be forced to do their duty, or confess their ignorance, because hitherto they have not studied phrenology, but have nevertheless joined in abusing it.

To come to insanity, a most important branch of phrenology in connexion with medical science. What is insanity? Give me a definition of its nature. If we speak of other diseases, we give definitions in conformity with the healing art; if we speak of inflammation of the lungs or of inflammation of the eyes, every medical man knows what to do, and how to treat them. Go through the whole catalogue of diseases, and their names indicate what parts of the body are diseased. What is insanity? Is it a diseased state of the body? Are you sure of that even? Not at all. We speak of diseases of the mind. Can the mind be diseased? The mind is immaterial; can it be diseased? I do not say so; I do not know a more dangerous doctrine than that of the mind being diseased. If you attach any meaning to the expression, what is meant by it? My organization may be diseased, and that disease may continue till it produces death. Can the mind be altered by degrees, and can it be destroyed? There is nothing annihilated in this life, although things change their form. Now what is this? Is there derangement of the mind from any cause without or from within? Shall we go back to the times when insane persons were considered to be possessed of evil spirits? If the cause be evil spirits, or any other cause from without, what have medical men to do with the treatment of insanity? Hence, I repeat, let medical men be forced to confess their ignorance, or take an interest in the study of phrenology. If they say insanity is an affection of the understanding, let the treatment of it be confided to metaphysicians and philosophers, and let them reason with them. We have an influence, as medical men, upon the organic conditions of the body, but we cannot act upon the immaterial existence itself. I repeat, therefore, What is insanity? It is important to give a medical definition of this state the most lamentable man can fall into. An individual being declared insane is deprived of all the rights of society, and is no longer considered answerable for his actions to society; he is treated like an outcast, and is shut out from the society of man. The consideration of insanity, therefore, is important to society at large, and not to the medical profession alone, although medical men are commonly called upon to declare whether a man is insane or not; but

how can they do this, unless they are first acquainted with the healthy functions of the mind? Must we not know the healthy state of the functions of the body first? Must not pathology be founded on anatomy and physiology? and these teach us where the derangement is going on. If the respiration be impeded, we know by anatomy and physiology that respiration is performed by the lungs, assisted by other apparatus, hence we know when the lungs are diseased; and to know when the respiration is deranged, we must know how it is performed in the healthy state. If we give a definition of insanity according to the notions now prevalent in society, we should say, "that it is a state in which an individual has lost his moral liberty; a state in which a man is no longer free, whether the defect lies in the intellectual or effective powers;" but I cannot say that a derangement in the functions of the mental powers is sufficient to constitute a man insane. My eyes may be deranged, I may see things yellow, but I may know the disease, and am not insane; I may have various morbid sensations, but am not therefore insane; I may have my feelings altered, and yet not be insane; as long as I know what is going on in things around me, I am not considered insane; but as soon as one of the three conditions I have spoken of in moral liberty is destroyed, then a man is declared insane. Look at an individual who has an internal sensation; as soon as he thinks that the object drawn in his mind has a true existence he is announced a fool. There are insane people who know that they have deranged feelings, and that these feelings are stronger than they ought to be; they have understanding enough to know that these powers are too active, but not understanding enough to control them. This definition is given by society at large, and is right in one respect, since this state is practically considered in its influence on society, and there is no other morbid state which has the same influence on society as this.

Here is another great difficulty with respect to insanity, and I think it is better for men to confess their ignorance than commit an error here; there is a state of insanity which is partial or intermittent. It happens that individuals for certain minutes cannot rectify their notions; they have certain feelings stronger than others, and cannot resist them; they have, for the time, no free will, and we declare them to be insane. Being declared insane for one single minute is sufficient to prevent a man for his whole life after from doing anything civil or social. Let this be done for the sake of society and I have no objection to it. Cowper was insane at

intervals, yet he made fine verses when he was not so; and shall we reject his poetry because he was insane at particular times? I wish to call your attention to the difficulties which exist in this respect in legislation, and there are difficulties in legislation as well as in phrenology. In various diseases the patients know individuals about them, but are you sure that the mind is perfect because they can do that? Animals can do the same, and so can insane persons; they have their lucid intervals, and can distinguish and recognise persons. I state this to make you reflect on the difficulties which exist even in deciding upon insanity, particularly so, since it is admitted that if they reason well they are not considered insane. Now, some insane persons reason as well as we do upon certain subjects, and not upon others; and phrenology teaches us how this can happen, since it shows that some powers can be in action and others not, and some diseased whilst others remain healthy. In short, the study of insanity is extremely difficult, and it is more difficult to decide upon insanity than is generally considered.

I go on to ask whether any definition can be given of insanity, with respect to the healing art? If we speak of inflammation in general, we know how to proceed and what treatment to adopt; but when the mind is deranged, and the state of moral liberty, both of the conditions under which that state occurs may be very different, and indeed must be so, since we find that the most opposite treatment cures insanity. This state is one and the same as respects the manifestations of the mind, but the conditions of the body may be various, and this is what we want to know. I say, not only to medical men, but to all others who take an interest in phrenology, and who have opportunities for observing patients of this description, that they must proceed here as in the investigation of any other disease; anatomy and physiology must be first studied, and then the derangement of function must be observed. I shall give you on this point a few general notions, since many persons remain yet prejudiced against phrenology, and since I do not see that those who even take some interest in it are sufficiently anxious to oppose popular errors.

In speaking of the proofs of the fundamental powers of the mind, we have said that any power singly may become deranged in its function. The power situated in the cerebellum may become deranged; the love of offspring may become deranged; self-esteem, attachment, cautiousness, any power whatever may become deranged in insanity, and be the cause of the different symptoms we observe in insane persons. In

phrenology we can easily conceive how one power may be deranged and how the others may go on in a healthy state, and hence give rise to the various forms of insanity. Some are bold in their insanity, others very fearful and melancholy. Persons separated from their children become insane from the love of offspring becoming too active ; others from the feeling of attachment, and others again on account of religious feelings. If you read the various divisions of insanity given by authors, you will find that they speak of melancholia, mania, dementia, and so on ; and then there is the religious melancholy, and various other melancholies ; you will find in Arnold's book such divisions, but you cannot be satisfied with a pathological division of that kind.

The most important point which interests us here is to acknowledge that the cause of insanity is corporeal and physical. The proximate cause is seated in the brain, and if you reflect on the state of derangement, it is inconceivable how any man can doubt the cause of it to be physical.

I come now to consider a prejudice respecting insanity ; it is said to be hereditary ; is that true ? Many do not like to have such a disease spoken of. It is considered a disgrace to a family ; but I say it is no disgrace, but the most pitiable calamity that can befall anyone. We, as medical men, must say that it is hereditary, as well as many other complaints. There are family faces and family noses, and there are family brains, and there are, as well as peculiar configurations in families, peculiar disorders, such as gout, goitre, apoplexy, &c. ; and why should not the affection of the brain be hereditary ? Others say it is a disgrace, and a selfish motive comes in, and other families do not like to intermarry with them ; that may be very proper ; but let us consider the ordinary way in which such persons are treated ; they are concealed, separated from society, and shut up. But would you neglect a patient who has inflammation of the lungs and scrofula ? will you separate him from society, conceal his disease, and confine him, and not call a physician to treat him ? Certainly not ; no such proceeding is thought of ; but the poor patient who manifests any derangement of the function of the brain is neglected, and a physician is not called in until the disorder is established, whereas, if called in at the beginning, great good might have been done. Unfortunately, medical aid is often called in too late. The longer a disease lasts, the worse it is and the more difficult to cure. It should be known that the brain can fall sick as well as other parts of the body ; and it is of the highest importance to seek for advice in the beginning of the malady, and that by doing so its cause may be frequently

arrested ; and the knowledge of the natural functions of the mind is very necessary to be able to "minister to a mind diseased." Insanity is corporeal, it depends upon a deranged action of the brain. The brain undergoes variations as other parts of the body, and seeing that diseases of the brain follow these variations as in other parts, so we infer that insanity is corporeal.

We very seldom see insanity in children, but very frequently in the adult, and at that period of a man's life in which the mind is most exercised, between twenty and fifty, and after that period there are not many who become insane. It is the result of causes acting from without, and not from causes called moral, but such as act upon the head, as too much loss of blood, too much drinking, and many other causes. Insanity has its fits ; it comes on from time to time, and goes off again, and it is difficult to suppose how this could be so, provided the mind were diseased. An inflammation of the eyes comes and goes away again, and it is the same with the brain, producing for the time that state called insanity. As to those fits of insanity, I should like to know how they may be explained. The phenomena of nature are constant in their operations, but they are more active sometimes than others, and what is here said of insanity must be considered as a general law, and will be found useful in every situation. No power is constantly active, but less so sometimes than at others ; a man may have attachment strong, he may be a very sincere friend, but his friendship may be more active at one time than another. So our other feelings are not always active in the same degree. There are periods of sleeping and waking in the twenty-four hours ; the brain wants rest, and we cannot act with our intellectual or effective powers without rest. Moreover, there are certain varieties in the feelings, even the higher feelings, on certain days. Persons are very little active on certain days, they cannot exert themselves much, and I am sure that anyone who has what is called a nervous temperament is particularly sensible of this ; a little thing offends, and he is touchy and irritable, and although his friends perceive it, he does not know it himself ; in a few days this goes off and he is as well as before. It is an important thing to attend in common life to mutual forbearance ; it is founded in nature as well as commanded by the laws, and medical men particularly are required to pay attention to it in the treatment of certain diseases. I appeal to them whether their patients are not better on certain days than on others, without the influence of medicine. It is the same in this species of insanity, a power is irritable and

excited, and we do not know why. We know that such things happen, and that there are a great many changes to which the body is submitted. We know that the body increases for a certain number of years, and then stands still; and there are times of decay, the climactic age.

The influence of education will be considered in the next lecture. All those who take charge of education know how different the intellectual powers of children are at certain periods. Seeing these facts, and considering the intermissions and exacerbations of insanity, it is impossible not to draw the inference that its cause is corporeal. I am convinced that the cause of all mental derangement is physical, and that its proximate cause is to be found in the brain, and to satisfy yourselves of this you must study anatomy and physiology. When digestion is deranged we know what part suffers, and we know frequently that the circulation is disturbed with it; the heart being affected by sympathy with the stomach. Now we cannot know where the derangement takes place without knowing the functions of the parts in the healthy state, and, therefore, what I have said of the individual organs must be studied singly and combinedly, and then it will be seen that the proximate cause of insanity is in the brain, either immediately originating in the brain itself, or being affected by the disturbance of a distant part by sympathy.

Some persons have said that the cause of insanity is not corporeal, because they have not found derangements in the organization of the brain after death; but if they will study the healthy brain, and examine those afterwards who die of chronic insanity, they may depend on finding a great difference. I have never seen a case in which I could not find a great difference; but this cannot be seen unless the healthy structure of the brain is first well known. Having studied the whole of the configuration of the brain and its functions, some persons have asked the phrenologist, Can you say whether a person will become insane or not? No, our knowledge will never go so far. I may see a person very active, a muscular, agile man, perhaps a tumbler or rope-dancer; can I say to him you will have an inflammation of the lungs, or to another, who has a good appetite, you will have an inflammation of the stomach? Every part of the body may become deranged, and the brain as well as any other part. If I saw certain configurations, such as these before me, I would say that the species of insanity called idiotism goes with them, because they are too small. (Three casts of the heads of idiots were on the table.) Some people have from infancy certain feelings stronger than others, and if we learn that a boy, for

example, has always shown great love of approbation, and a desire to command others, you may be generally sure that such a person, if he should become insane, will show the predominance of this feeling. The organ is found large in such a person. I have never known an instance to the contrary. Here is the cast of a person who became insane from excess of pride, and you see how very largely developed the organs are hereabout. (The upper and back part of the head.) If you know persons who have been serious from infancy, and who by any acquired weakness have become insane, you will be sure to find such indulge in melancholy, and Cautiousness will be found very large. If persons labour under religious derangement, as is sometimes the case, then the organ of Veneration will be found large.

I might speak here of the moral causes of insanity, but there are no moral causes of it. What is meant by moral causes of insanity? If you call moral "the action of the feelings and intellect," I say, yes, I agree with you that there are moral causes; but if you separate from the moral causes the influence of the organization, I say no, there are none such. What are, then, the moral causes? They are merely the activity of the brain: the feelings and the ideas are to the brain what the aliments are to the stomach and the light to the eyes. Give too much food to the stomach and too much light to the eyes, and see if these organs will not become deranged; and give to the brain more than the brain can bear, and it will become deranged also. Religious feelings have too often disordered the mind; if you see religious feelings strong, with great action and exaltation going on, encourage them, and you might soon send them to the mad-house if you liked. What is called the moral cause of insanity is the activity of the feelings. The feelings, becoming too active, are no longer under the control of the intellectual powers, and that constitutes insanity; and it may be so in the lower or in the superior feelings. A man may have Benevolence too active; he may give away everything that he has, and we call such a man a fool. The individual feelings being exalted, it becomes a most important duty to exercise those feelings which are opposed to them, and thus tend to prevent the excesses. Seeing a feeling exalted, shall we go on with it, or shall we take such measures as shall give no opportunity to encourage the action of that power? Suppose the feeling of veneration should be too strong, shall we give the person religious books to read, which are to make him more deranged? So that a medical man requires an absolute knowledge of the human mind in order to treat

insanity. I am sure that if persons would pay more attention to the examination of the brain in the healthy state, they would not have any difficulty in detecting changes in its organization in insane persons ; it has even been found that the part of the brain has proved to be most diseased which has been the seat of the most predominant feeling during the insanity.

Sometimes there is a single power deranged, at other times there is a combination ; the animal powers are sometimes very active, and yet the intellectual powers go on, and this happens in suicide, or suicide combined with murder. An individual wishes to die, and he has not courage to kill himself, and, in his insanity, he does that for which he will be put to death ; he arranges all his concerns, and makes a preparation before hand, and he goes away with a determination to kill someone ; and I have known many cases of that kind, for which they say the person must be hanged. We see here a case of an individual feeling being deranged, and yet the intellect remaining sound ; the man acts so because he wishes to be killed, but justice says we have no right to do so, since we have declared once for ever that we have no right to kill an individual because he is insane. Judges themselves do not yet know sufficiently that individual powers of the mind may become deranged and yet the others remain sound. If I am told that an individual has committed a murder during his insanity, do you suppose that in every case I should look for a large organ of Destructiveness ? I would inquire as to the motive, and if I found that a person dispatched another in order to save him eternally, having sent him away that he should sin no more, I should rather look for the organ of Conscientiousness to be large than that of Destructiveness.

Another proof that the brain is the seat of insanity, and that its derangement is the proximate cause, is to be found in the great consolidation and thickening of the bones of the skull, particularly if the insane person had an accute irritation in the beginning of the disease. We know that sometimes the skull becomes as hard as ivory ; not a mere absorption of the diploe by which the outer and inner tables approximate, but an absolute thickening and hardening of the skull like ivory. (The section of the skull of a person who had been idiotic ten years was shown.) Altogether, you must be convinced that the cause is in the brain, and if it were not, medical men could have no influence ; but as it is they are allowed to have some influence ; the sooner they exert it the better, as it happens in this, as in every other case of disease, that if attended to in the beginning it may be materially

benefited, if not removed; but if neglected, little or no advantage can be expected from the subsequent treatment.

My object has been to-day to show that the cause of insanity is corporeal and principally dependent on the brain, and that for this reason medical men must find an interest in the study of phrenology, because I hope that by degrees insanity will be taken up as a branch of study by medical practitioners in general, and not be confined as it is now to a few persons. Why should it not be generally studied?

In the next lecture I shall speak of the application of phrenology to education.

ANTS, BEES, AND WASPS.

IF the anthropoid apes approach man in bodily structure, when the habits of ants are considered, their social organization, their possession of domestic animals, of slaves, that they at times are monarchical or republican, "it must be admitted," writes Sir John Lubbock, "that they have a fair claim to rank next to man in the scale of intelligence." This most interesting work may be considered as a study, not so much directed toward the habits of ants, bees, and wasps, as to test their mental condition and power of sense. It had been the author's intention at first to devote his attention more particularly to bees, but he found that ants were more convenient for most experimental purposes, as bees were so much more excitable. As one of the results of his investigations, principally by the study of individual ants, Sir John Lubbock has been enabled to show that they enjoyed a very much greater longevity than was supposed, as he mentions a nest of ants which has been under his constant observation since 1874, and that in March, 1882, some of these ants, with their queens, were now fully eight years old.

To briefly describe the methods employed by Sir John Lubbock to study the various habits of the ants, it may suffice to state that he inclosed them in glass boxes supplied with earth, which were kept in the shade when possible. To keep the dirt moist, artificial rain was supplied from time to time. Around each nest a little moat of water was introduced, which confined the ants to their respective habitations, and in time they seemed to be attached to their homes, and each individual knew her own habitation perfectly well. In order to study particular members of the family, Sir John Lubbock had recourse to marking certain ants, and the most convenient

way to do so was with a small dab of paint. With bees or wasps he snipped off some small fragment at the extremity of the wing. No difficulty was found in marking bees or wasps, for when honey was given them they became so intent that they quietly allowed paint to be applied. As no two species of ants are identical in their habits, it is not easy to discover what is exactly their mode of life, and, as they are gregarious, it is difficult to keep a few of them alive. If a whole community is studied, the elements are so complex as to escape examination; and then again in the same species individuals seem to differ widely in character.

Dividing the life of the ant into its four well-marked periods of egg, larva, pupa, and perfect insect, that of the pupa seems to be the most curious. In many cases these pupæ would perish if not for the assistance the ants render them. "It is very pretty to see the older ants helping them to extricate themselves, carefully unfolding their legs and smoothing out the wings with truly feminine tenderness and delicacy." When the ant emerges from the pupa he is as large as he ever will be, excepting that the female will sometimes increase the size of the abdomen from her eggs. Generally works on entomology assert that the males die almost immediately, but Sir John Lubbock, having isolated some males in August, 1876, kept them alive until the following spring.

Passing over the construction of the ant, only discussing the question of their want of sting, the author thinks that, when comparing them with bees and wasps, it is with the *Formica* a case of retrogression contingent on disuse. What is indeed so wonderful is that, in some cases, as in the *Formica rufa*, the poison gland remains. The author tells us that, disturbing a nest of *Formica rufa* in Switzerland, "a hand held as much as eighteen inches above the ants was covered with acid." As ants fight mostly with their mandibles, it may have been found more convenient for them to inject their fluid into the wound. The author tells an amusing story of hostilities between the little *Cremastogaster sordidula* and the much larger *Formica cinera*. The first were feeding on honey when the bigger *Formica* approached. The little ants prepared for action as it were, threatening their foes with the tip of their abdomen. This was sufficient to intimidate the bigger ants, who immediately beat a rapid retreat. It was, of course, an acquaintance with the pain caused by the acid which had been remembered.

Very curious are the various methods of fighting in use by ants, and the military instincts differ. *Myrmecina Latreillii*

are cowards. Provided with a thick skin, they roll themselves in a ball, and do not defend themselves, relying upon their own peculiar bad smell. The *Tetramorium cæspitum* feigns death, and stretches his legs and antennæ close to his body. *Formica rufa* is a desperate fighter, though he rushes to the attack only in column. He is magnanimous enough not to follow a flying foe, "but he gives no quarter, killing as many enemies as possible." Now, your *Formica sanguinea* is only blood-thirsty in a slave-catching sense, for he attempts rather to scare his enemy than slay him. *Formica exsecta*, a small and delicate ant, is very active. He uses all his agility in the field. He springs at a foe, teases him, dances off, is out of the way, and then at it again. There seems to be, however, in all cases something like differentiation, certain individuals having special functions.

As there are different kinds of workers in the same nest, all produced from the same egg, the question arises how to account for these variations. Sir John Lubbock is disposed to concur with Westwood, that the inhabitants of the nest have the instinct so to modify the circumstances producing these states of imperfection, that some neuters shall exhibit characters at variance with those of the common kind, and our author adds: "The exact mode by which the differences are produced is still utterly unknown."

The variations as to nests are very great, adapting themselves to their surroundings. Sometimes they are of really vast extent, for in Para there are nests which cover an area of seventy yards. In a single nest there may be from 5,000 to half a million of individuals. Ants feed on insects, honey, honey-dew, and fruits, and scarcely any animal or sweet substance comes amiss to them. It is the small garden ant, *Lasius Niger*, that ascends bushes in search of aphides. "The ant taps aphis gently with her antennæ, when the aphis emits a drop of sweet fluid which the ant drinks." Sometimes the ants even build covered ways up to and over the aphids, which, moreover, they protect from the attacks of other insects. Some slurs having been directed lately toward the ant, as to its industry, Sir John Lubbock finds this imputation of laziness entirely at fault. "They work all day, and in warm weather, if need be, even at night, too. I once watched an ant from 6 in the morning, and she worked without intermission till 9.45 at night." That ants have their jollifications and bits of fun seems quite positive. Forel, a keen French observer, writes of having seen them "catch one another by the mandibles, roll over on the ground, and keep up a sham battle for some time without the least display of anger."

The author comments on the cleanly character of ants, and how they assist one another in this respect. Those ants he had painted for facility of recognition were gradually cleaned by their friends. Studying the methods of providing food, from some curious experiments, the author thinks "that certain ants are told off as foragers, and that, during winter, when little food is required, two or three are sufficient to provide it." Some most strange facts have been discovered by M. Wesmael in regard to a remarkable genus, (*Myrmecocystus Mexicanus*), in which certain individuals in each nest serve as animated honey-pots. From the study of these peculiar individuals it seems as if the foragers bring to it their personal supplies. The honey-pot receives the honey, retains it, and redistributes it when required; in fact, this insect is the ambulant storehouse of the community. As its name denotes, it is found in Mexico, but Sir John Lubbock cites another species with this same trait as coming from Australia.

In that relationship which exists between ants and flowers, the ant does not exercise the same influence as the bee. Cross fertilization being the end to be obtained by the beauty, scent, and honey in the flower, the presence of winged insects becomes necessary. "Creeping insects could not pass readily from flower to flower, but would have to devote themselves to an individual plant; in fact, plants themselves seem to protect themselves against ants by means of peculiar devices." Surfaces are made slippery and collars are grown around stems, with curved surfaces, so that ants cannot pass to the flowers, and even the flowers are protected by spires and hairs. Viscid secretions prevent access, and small insects are limed and perish in attempting to enter certain flowers. Though ants, then, have not as much influence on the present condition of the vegetable kingdom as bees, they produce considerable effects in various ways. European ants do not apparently strip trees of their leaves, but in the tropics certain species do a great deal of damage in this way. One observer advances the idea that these leaf-stripping ants tear the foliage into small strips and allow them to ferment, so that a fungoid growth takes place, which mushrooms are eaten by the ants. Mosely calls attention to a curious action of ants on two plants, which plants seem to be curiously associated with these insects. When these plants develop a stem the ants gnaw into it, and this irritation causes the stem to swell. Continuing their gnawings into this vegetable portion, in time it assumes a globular form, until it becomes larger than a man's head. In this globular mass the ants construct

chambers and passages, which are used as a nest. "The walls of these chambers and the whole mass of the inflated stem retain their vitality and thrive, continuing to increase in size with growth. From the surface of the rounded mass are given off small twigs, leaving the leaves and flowers."

Ants serve to protect plants by destroying caterpillars and insects. The vast quantity of insects killed by ants has been calculated by Forel, who estimates that during the period of their greatest energy more than 100,000 insects are destroyed in a day by the inhabitants of one nest alone. It seems doubtful, as yet, whether any European ant stores grain, though the Indian ant, *Pheidole providens*, collects large stores of grass-seed, and has even been observed after the monsoon to bring to the surface their stock of grain, so as to dry it. In their relationship to animals the action of ants is well known. The Driver Ant of West Africa, is the dread of every living thing; writes Savage, "When they are fairly in we give up the house, and try to await with patience their pleasure, thankful, indeed, if permitted to remain within the narrow limits of our beds or chairs." Rats, mice, lizards, blapsidæ, blattidæ, and all vermin go down before them.

It is most especially in regard to the social and friendly relations between ants and other animals that many complex and interesting characteristics are to be found. Even before the time of Linnæus, who wrote "*aphis formicarum vacca*," it has been known that ants derived an important part of their sustenance from the sweet juice excreted by these aphides. In the Baltic amber, so the author tells us, there are the remains of a species of ant intermediate between the small brown garden ant and the little meadow ant. Now, the ants of to-day may owe their colour, light or dark, to the fact that they feed on the sweet of the aphide, according to the habitation of the aphides, the *Lasius brunneus*, making aphides living on the bark of trees, while the *Lasius flavus* "keeps flocks and herds of root-feeding aphides." Ants not only care for the full-grown aphides, which give immediate returns, but absolutely collect the eggs of the aphides and nurse them until they mature. Some very beautiful experiments are due to Sir John Lubbock, who, in one case, having reared some aphides, which laid their eggs in the nest, had the satisfaction of seeing the aphides' eggs taken by the ants and placed on plants. "They were of no direct use to the ants, yet they were not left where they were laid, exposed to the severity of the weather and to innumerable dangers, but brought into the nests by the ants, and tended by them with the utmost care through the long winter months, until the

following March, when the young ones were brought out and again placed on the young shoots of the daisy." This fact of having kept the eggs for six months in order to procure food during the following summer was a case of prudence "unexampled in the animal kingdom."

But apart from motives of interest, ants seem to form associations with insects which are of the strangest character. What bond of union can unite a small black fly of the genus *Phora*, which lays its eggs on the ant, is not understood. There is an active beetle, too, which lives in the ant nests, and is never molested. Sir John Lubbock suggests that they may be scavengers. There are cases, however, of close association where the ants apparently take care of their guests. A curious beetle, which is blind, is entirely dependent on the ants. It seems to have lost the power of feeding itself. Mr. Francis Galton has advanced the opinion that some of the apparent intruders are kept by the ants, as are our domestic animals, for pets.

Ants live generally by themselves, each species inhabiting its own nest, but there are some exceptions. The author cites a large and a small species, living together where the pigmies are the bitterest foes of the giants, because the latter cannot follow the tiny robbers through their galleries. "The little *Solenopsis*, therefore, are quite safe, and, as it appears, make incursions into the nurseries of the larger ant, and carry off the larvæ as food. It is as if we had small dwarfs, about eighteen inches to two feet long, harbouring in the walls of our houses, and every now and then carrying off some of our children into their horrid dens."

What a wonderful lesson in evolution is taught when the characteristics of *Polyergus rufresceus*, the slave-making ants, are studied. They have become so dependent on their servants that their mandibles have lost their teeth "and become mere nippers, deadly weapons, indeed, but useless except in war." They cannot build nests, they do not rear their young, they provide no supplies, and if they have to change their ground, masters have to be carried by their slaves. Huber's experiments with them are well known. He took thirty amazons, with their pupæ, and deprived them of their slaves. More than one-half of them died of hunger in forty-eight hours. They had made not one single effort to establish themselves. Then one slave was put with them, and this individual, unassisted, gathered larvæ, extricated the pupæ, and preserved the life of the remaining amazons. Sir John Lubbock's experiments with the *Polyergus* were quite convincing as to Huber's researches. In fact, save for the

single trait of being bold and powerful marauders, they had lost all their industry. The ascent and descent in ant life is notable, for it is in the *Anergates* that the lowest level is reached. From the enervating influence of slavery they have become weak in body, few in numbers, and apparently nearly extinct—"the miserable representatives of far superior ancestors, maintaining a precarious existence as contemptible parasites on their former slaves."

Very clever is the comparison drawn by our keen observer between the communities of ants and of men; for instance, *Formica pisca* is a primitive race, living principally by the chase though feeding on the honey of the aphide, but not having yet domesticated these insects, resembling the lower and less cultivated races, while the *Lasius flavus*, with skill in architecture, its domestication of aphides, its caring of pets, presents the pastoral change of progress. Now, if the grain-storing ants, which, according to Dr. Lincecum, Buckley, McCook, and others, absolutely tend to the culture and harvest of certain plants, one may have, as Sir John proposes, the three types of men represented—the hunting, the pastoral, and the agricultural stages: that is the history of human development.

In the chapters entitled "Power of Communication" and "Recognition of Friends," Sir John Lubbock proves quite conclusively that ants enjoy such powers, though they apparently have but the faintest sense of hearing, though that of smell is highly developed. As to the sense of sight, it seems that this aids ants but little in guiding their course, though the mental power of remembering a direction once taken is fully shown.

As bees were much more difficult to study, the number of Sir John Lubbock's observations are limited. He found that the discovery of honey by one bee was by no means so rapidly imparted to the other bees as was supposed. The apparent greediness of the bee the author excuses with the plea that their eagerness is for the welfare of the commonwealth rather than for personal gratification. As to the moral sense bees are supposed to have, Sir John thinks, with all bee-keepers, that they have no conscientious scruples about robbing their weaker brethren, and that once a bee has stolen the sweets derived from another's toil, he seems to lose all sense of probity, and becomes such an unmitigated robber as to refuse, in some cases, ever to work again for himself in a legitimate way. Siebold advances similar ideas in regard to wasps. Bees have apparently less sentiment than ants. Sir John Lubbock killed a bee, ("It was necessary for me to kill

a bee occasionally," writes Sir John apologetically, having the opponents of vivisection probably in his mind,) and the other bees took not the least notice of it. As for bees licking one another, it is to be regarded as an action entirely devoid of affection, and only dictated by a desire to obtain honey. In regard to the colour sense of bees, experiment seemed to show quite conclusively that they had a decided preference for blue. Now, as inconspicuous flowers have their pollen distributed by the wind, and highly coloured ones are fertilized by insects, it must be the particular hues which influence the bees, and by this means, studying the idiosyncrasies of the bees, we might arrive at the discovery of the original colours of flowers. If blue flowers are comparatively rare, and this colour is the favourite one, how account for there being so few blue blossoms? The author thinks that all flowers were originally green and inconspicuous, and that the first transition of colour was to a blue, and that blue flowers contain to-day a larger proportion of honey than others. As to the "bee line" which is so well known, wasps have the same wonderful instinct as to taking of the most direct way home. A wasp introduced into one window, its home being in the opposite direction, where there was a closed window, the insect invariably tried first the shut window.

These studies, when handled by such a master as Sir John Lubbock, rise far above the ordinary dry treatment of such topics. The work is an effort made to discover what are the general, not the special, laws which govern communities of insects composed of inhabitants as numerous as those who live in London and Peking, and who labour together in the utmost harmony for the common good. That there are remarkable analogies between societies of ants and human beings no one can doubt. If, according to Mr. Grote, "positive morality under some form or other has existed in every society of which the world has ever had experience," the present volume is an effort to show whether this passage be correct or not.

CHIT CHAT ABOUT GEORGE COMBE.

From my earliest days I have been a reader of books, and it is now a second nature with me to have one good readable book lying about ever ready to be taken up to be read at odd moments. Newspapers one must read in order to learn how the Plagues in Egypt are getting along, or how Britain endures with such patience her perpetual blister of Irish

grievances, and which are as great a calamity to this country as anything that ever afflicted old Egypt. A newspaper, of course, is but the history of the day we live in, and is truly one of the most wonderful products of an age of marvels. To think that you can sit down to your breakfast of a morning, and in the broadsheet placed before you, can see the leading events of yesterday's history of the world at a glance—what has been done in Europe, in America, in India, in China, in Japan, but a few hours ago! Yes, a newspaper is one of the greatest marvels of a marvellous age; but its items of news are rude and fragmentary, and not to be compared to a good readable book. So I keep my book at my elbow as a sort of tonic to my mental system.

The book I have been reading lately is the Life of George Combe, philosopher and phrenologist, and it has most deeply interested me. I remember, when I was a youth of sixteen, taking out of the Mechanics' Library a copy of Combe's "Constitution of Man," and was plodding through it in my leisure moments. Our minister, a man of wide and varied knowledge and scientific attainments, and for whom I had the most unbounded reverence, called at the house and engaged in conversation with my father. The "Constitution of Man," was lying on the table, and the minister took it up and inquired who was reading that book. My father told him, and the minister looked at me with serious and reproving glances. I was puzzled to find out what sin I had committed, and I rather think I returned his glances with interest, for he laid down the book saying—"I bought that book, and when I read a few pages, and found that it denied God's special providence in the government of the world, I laid it down unread." Young as I was, and inexperienced in philosophical investigation, my spirit rebelled against this off-hand priestly condemnation of a book containing, as I thought, the very essence of a high morality and natural theology, and I there and then resolved that, whatever my minister might do, I, at all hazards, would read the book to the end.

What strengthened me in my resolve was a paragraph from Sir John Herschell's address to young students that I had seen somewhere, and which address got rivetted in my mind never to depart from it. It was to this effect—"Follow truth, no matter where you think it may lead you, feeling assured it can never lead you wrong." I placed that golden sentence against the minister's *dictum*, and I adopted Herschell's advice, and that rule have I followed through life. I read through the "Constitution of Man." I found nothing in it that a reasonable man could object to, and

nearly every page revealed to me the remarkable harmony subsisting between man's nature and the laws of the physical, organic, and moral world in which he was placed, and no longer considered man as a failure and the world a badly-constructed machine, as certain theological dogmatists pronounced them to be. On the contrary, the full and complete harmony subsisting between man and the constitution of the universe broke on me like a new revelation, and I blessed the day that I had read the treatise in question. Yet George Combe, a deeply religious man after his own lights, was stigmatised as an infidel, and his writings were denounced as such from the pulpit, platform and press ; but notwithstanding the bigoted storm that raged around, George Combe pursued the even tenor of his investigations, calmly and undisturbed, impressed with the conviction that if his views were true all the priestly fulminations that could be hurled against him would not prevent the people from accepting them.

"Let truth and error grapple ; who fears for the result ?" exclaimed Milton, and George Combe was right. His book was banned, but it sold by hundreds of thousands. It was translated into nearly every language on the Continent. It was poured from the American press, edition after edition, and in an abridged form was used as a class book in the State schools of that country.

* * * * *

And now, the views propounded by George Combe in his remarkable work on God's government of the world, and all that live therein, all but universally prevail.

All the political and social reforms which have been achieved within the last fifty years—free trade (for he was a close friend and counsellor of Richard Cobden), extension of political rights to the people, sanitary reform in all its ramifications, abolition of slavery, and national unsectarian education—found in George Combe an enlightened and determined advocate ; and, in fact, these principles, formerly so reprobated by the "unca guid" of his countrymen, and now so universally accepted, are found eloquently and philosophically discussed in his "Constitution of Man."

It is amusing to look back thirty years, and contemplate the terror and abhorrence in which the work in question and its eminent author were held by the then religious world. Here is an incident that occurred in 1851—

A meeting was held at Edinburgh, in November, to hear Combe lecture on "The Comparative Influence of the Natural Sciences and the Shorter Catechism on the Civilization of

Scotland," and at the close of the proceedings an incident occurred which excited considerable interest.

Combe in his lecture had referred to a report presented to the Free Church Assembly by the Rev. Dr. Robert Buchanan, of the Free Tron Church, Glasgow, in which that gentleman described the lower classes of his parish as sunk in "almost every species of personal debasement." Dr. Buchanan further stated—"In that single parish we have met with 151 individuals who proclaim themselves infidels. In the case of these men, the only God they acknowledge is the laws of nature, and the book held in highest reverence amongst them is some Socialist periodical, or perhaps "Combe's Constitution of Man."

Combe remarked with wonder that, according to Dr. Robert Buchanan, most of the 151 individuals were characterised as infidels because they "recognise God as manifested in the laws of nature!" He was acquainted with Dr. Buchanan, and respected his zeal and talents. Accordingly, feeling curious to discover the effects of this form of infidelity on their condition, he asked him for the addresses of some of the men. Dr. Buchanan declined to give them, on the ground that he had no right to expose the parties to such inquiries as Combe seemed disposed to institute.

After the close of the lecture, a working-man entered the side-room of the hall, and, addressing the lecturer, said—"Sir, I am one of the men referred to by Dr. Buchanan. My name is Charles Don; I live at 59, Trongate, Glasgow, and happening to be in Edinburgh to-day, I came to hear your lecture. The agent of Dr. Buchanan called upon me and examined my books, and made a note of "The Constitution of Man." Along with it were two copies of the Bible. Paley's Moral Philosophy, Shakespeare, Byron and Burns's works, and a variety of other books. Dr. Buchanan does not mention them."

The lecturer said—"Are you sunk in almost every species of personal debasement and moral degradation?" "You may look at me, and judge for yourself."

He was then requested to stand forward and allow a number of gentlemen who were present to see him. They found him to be a strong, well-dressed, clean, healthy-looking young man, whose clear, bright eye and expressive countenance indicated attention to the natural laws of health instead of "personal debasement." He added—"You may publish my name, and Dr. Buchanan is welcome to visit me whenever he pleases."

At Combe's request, Mr. Charles Don, when he returned

to Glasgow, endeavoured to discover the 151 infidels. He and a number of working men formed themselves into a committee of inquiry, rummaged the entire parish of Dr. Buchanan, but failed to discover his sensational 151 infidels!

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“Combe’s Life” is a most instructive book, for, besides being the history of a just and wise man, it contains graphic sketches and mental estimates of the various celebrities that he came in contact with. In his general character he reminds the reader of the nearest approach, in modern times, to Socrates. He is, indeed, our Scottish Socrates, and was far in advance of his time, and suffered in consequence from the bigoted and unintelligent of his countrymen. The persecuted and persecutors now lie in their graves—the former lives in his writings, while the latter are all forgotten. George Combe in his moral philosophy—in his clear views on social questions—his brother, Dr. Andrew Combe, on physiology and the laws of health, and the Brothers Chambers in general literature, may be said to have educated the bulk of the people of Scotland more effectually than all the schools and colleges that were in existence at the time.

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And now, reader, if you and I have got thus far, I pray you go a little farther. Procure the “Life of George Combe”—I know you can get it in the Mechanics’ Library—and read it, and if you enjoy it as much as I have done, you have a great treat in store—a treat that will mightily strengthen and invigorate your mental and moral nature.

“DEMOCRITUS,” in the *Greenock Herald*.

THE THREE-TOOTHED RAKE.

I suppose the girls of Milburn would all resent the imputation, if I should say any of them envied little Phebe Bird when she set up housekeeping with Ridgeway Dayton, on the finest farm the country afforded, in a house that was in thorough repair and fully furnished. It was an establishment to be proud of, and people said that if that young couple did not prosper it would be their own fault.

“There, Ridge,” said Uncle Aleck, “is your farm and stock and house all paid for, and now I shall do no more for you. If you don’t hoe out your row you’ll have to starve. I am going abroad, so I shan’t be coming around to advise you and scold you, and I expect it will come pretty tough with you for a while. But Phebe is a sensible girl, I am happy to say, and I think I leave you in pretty good hands,”

Ridge secretly felt rather pleased at the prospect of being "left," but he did not say so. Uncle Aleck was an excellent man to provide, but he was a little sharp in his way, as the young man had occasion to know at times in his juvenile years. The old gentleman himself had been reared under a system which might be formulated in the old couplet—

"A boy, a dog, a walnut tree,
The more you thrash them, the better they be."

The system had been greatly toned down in the case of his orphan nephew, but Ridge thought it strict enough.

His choice of a wife had pleased his uncle as well as himself, for Phebe was a very domestic girl as well as a cultivated one, and it was the general verdict that "both had done well." Still Aunt Cynthia did tell Ridgeway she wished he "had got a wife who would make him stand around a little more."

"Oh, she'll make me stand around enough," laughed Ridge. "You need not be concerned about that."

"She'll have need to," said Aunt Cynthia, nodding her head sagaciously. She had known his manner of life from his youth up, and said he was always a very good boy if he only had a steady hand with him to keep him in order. But Ridge believed "aunts and uncles never did appreciate a fellow." Now it was worth while to have the worshipful direction of such a sweet, appreciative little soul as Phebe Bird's, and he did think himself a lucky fellow; and he was.

A stout, capable hired man was engaged at the outset, who understood his business, and, appropriately, received good wages. So the cares of life sat very lightly on the young farmer's shoulders, though he felt the responsibility of Atlas when he shouldered the world, having not only his own, but his wife's domain to look after.

Just when the serpent entered into this little Eden could not distinctly be told. I have no doubt that he "wired in and wired out" among the vines and shrubbery of that "first garden" for some time before he presented himself to our first mother.

If Ridgeway was a little exacting and very particular, Phebe was self-sacrificing and painstaking; so there was little jar in the machinery. He thought strict order and system about work a very excellent thing—for other people—especially for a man's wife. Breakfast at seven, dinner at twelve, and supper at six, always on the table at the minute, was his standard; but, of course, if he could not be on hand just at the time it was necessary to keep things hot and at their best for half or three-quarters of an hour, and it would be nice for her to fill up the time with sewing, or some little

thing of that kind. It need not be lost time to her, by any means. Of course a man's work is the important work of the world, always.

Ridge, from his inexperience in household affairs, had inbibed a theory that if a woman is but economical, it costs "next to nothing" to support such a small family "on a farm." He was astounded at the cost of sugar and coffee and tea, and the dozens of little outgoes every week. It must be there was something wrong somewhere. All his pet theories were getting knocked in the head. In vain Phebe mildly reasoned with him; showed him how long supplies could reasonably be made to last; proposed retrenching on cake for tea, but, of course, he would not hear of that. He liked cake. She never spoke of retrenching on cigars, though some women would. But all her "argufying" was without avail.

"A man convinced against his will
Is of the same opinion still."

Somehow, the more Ridge thought about it the more convinced he was that his wife could hardly be a wise manager. He was disappointed because the money did not pile up quite as he expected. This was another demolished theory which considerably set him back. But then he remembered an old adage which says, "A man must ask his wife's leave to thrive," and he was somewhat comforted. Phebe was young. She might yet be induced to change her manner of doing business. Perhaps he had been too indulgent himself, and had provided too lavishly for the supposed wants of the household. He might, and indeed he must turn over a new leaf. In other words, he would tighten the thumb-screws a little, and see if the effect on his victim would not be salutary.

Phebe had grown very reluctant to ask for what was really needed in the house, so sure was she of that adverse criticism so intensely humiliating to a woman of fine nature. If water will wear a stone, so will perpetual petty fault-finding eat away all home happiness. If Phebe had been more self-asserting in the start, it would have been far better. She could have educated the young man into a reasonable householder. But instead she took a very wrong course, and, by dressmaking in over hours, contrived to earn a little money. This went to eke out the scanty allowance her husband thought so munificent for the expenses of "so small a family."

When supper was over, Ridge harnessed up and drove to the village in his fresh, cool suit, to get the evening mail.

It would have been a rest and refreshment to Phebe to go too, but there was the supper to clear away, the milk to set, little Aleck to care for, and Ridge would have thought all things going to wreck and ruin if she should so desert the ship.

"Uncle Aleck is at home, Phebe!" said Ridge one evening, in great excitement, as he returned with a letter. "Now, I need not tell you how important it is for all of us that we make a good impression upon him. My uncle is a good man, but he has his peculiar notions. He was always lecturing me on economy. If he gets the impression that we are living extravagantly, he may cut me off with a shilling. Try to have little Aleck at his best, and, if possible, keep him from crying. We must study to provide his favourite dishes, for he always feels crusty if his meals do not please. I have laid by a little money, though not half what I expected—our living expenses have been so high; but I know Uncle Aleck will be gratified to know I have saved even a little."

"There are a number of things we need," suggested Phebe, wearily. "I suppose your uncle will always prefer white sugar in his coffee, and it is much the best for everything. We have none. And the coffee pot is so leaky I can hardly make coffee in it; and the tea kettle is a great trouble for the same reason. They really ought to be mended."

"And the same of half the tin ware in the house, I suppose," he said with a lofty smile, as he lighted his cigar.

"It is very true," said Phebe, with no smile either.

"Now, don't it seem to you, Phebe," he said, argumentatively, "that three years is a very short time for tin ware to last? I think my Aunt Lucinda has pieces she bought forty years ago."

"Tin ware is not what it used to be."

"I know women say so, but after all it depends a great deal upon the way it is used." Whereupon followed a discourse on the use of pans and basins that was supposed to effectually settle the question about the necessity of her particular stock being mended.

The modern Pharaoh still persisted in demanding bricks without straw, so with the very scanty resources Phebe set about preparing for the dreaded visit. She would have liked a little girl to help take care of baby, but her husband objected on principle. It might look extravagant to Uncle Aleck, and the board of such a girl would be more than her wages.

It was a beautiful day in June, and the country at its best,

when Uncle Aleck came. He gave his nephew a hearty hand-shake, and looked over his added pounds of avoirdupois with laughing eyes.

"Farm life hasn't worn you down, I perceive," he said, as he stepped into the buggy.

The supper was excellent, the house like a new pin, baby sweet and fresh in his clean white tucker, and there was only one shadow that those keen grey eyes detected, and that was the worn and faded look of the young mother. It filled him with solicitude, and gave him real pain, as he feared the young wife might be in failing health, and his poor boy be left early with only a memory and a pictured face, as he had been these many years. One thing which had so drawn him to Phebe was her resemblance to that little ivory painted picture he bore with him over land and sea. He wondered if there was not a cause for her pallid cheek, that might yet be discovered and remedied. Full of this intent, he kept a sharp look-out from under his shaggy eyebrows, as he walked around the premises. The farm was kept up to a state of high thrift and neatness by the hired man, and Ridgeway got the credit of it. But indoors there was a scrimped, unhandy look about most of the working implements, which did not escape observation. He saw Phebe tinkering her tins with bits of twine drawn into holes, and he heard Ridge expostulating with her in the kitchen about some supplies she needed. He sat through a Monday in the cozy sitting room, where he could hear her toiling at the wash-tub, and hurrying to get up the meals, while she attended to the neglected baby when she could catch a moment's time. His indignation was at white heat by night, and he felt that he could have caned "that graceless scamp," his nephew, with pleasure, for permitting such a state of affairs.

They walked out after tea and looked at the growing crops, Ridgeway feeling unusually well satisfied with himself and all his doings.

Uncle Aleck's first remark hardly chimed in with this sentiment.

"Didn't it ever seem to you, Ridge, as a rather one-sided arrangement that you should have a stout man to help you out of doors, and your wife no help at all in doors? Turn about is fair play. Suppose, now, that you try the business for three years alone, and let her have the help."

"Oh, uncle," expostulated Ridge, "there is steady work for two men on the farm the year around."

"And steady work in the house for two women; and you have let a young, delicate wife carry it on single handed, and,

as far as I know, have never remonstrated with her on the slow suicide she was committing. Such havoc as three short years have made! It ought to make a man ashamed, if his feelings are not iron-clad, so to overwork a woman he has vowed to love and cherish."

Ridgeway reddened at his uncle's plain-dealing, but he was not disposed to admit that he was the one so much to blame.

"I tell you, uncle, Phebe has not the faculty of getting along with her work that some women have. It takes her longer than it needs to get every meal. I am sometimes almost surprised."

"It certainly does take her longer than it need to. I have plainly seen that, and now, young man, I'll teach you a lesson. You are to rake hay to-morrow, I believe. I'll fix you a rake, and I'll see you use it." And the irate old man smashed all but three teeth out of a good rake and handed it over to his nephew. "There's your implement, and I'll come out and see how you get on with it. There'll be no shirking either. Everything I have seen of your in-door home conveniences has been just of that order. Your wife works with a three-toothed rake from morning till night. It is good to be saving and lay up money, but not if you must grind it out of the life blood of those who should be nearest and dearest to you. No more new rakes for you until I see a different order of things in the house! Let Phebe make out a list of all she needs as we are together this evening, and then do you draw a check and foot the bill."

"Why, uncle, you have never kept house. You know nothing of women's demands. It would sweep every cent I have."

"Let it sweep, then! Money gotten dishonestly as that was had better go to the place where it was stolen from. You have been robbing your wife of her life-power, her health and her happiness, these three years. It is time you make reparation. I have preached economy to you, it is true, but I never preached dishonesty. If you can't keep your wife in a decent way, break up and let Phebe go back to the good home she came from. You can go into a store in the city and make your own living."

What a desolate picture it was! Leave his pleasant home, his wife and boy, and take up with the old solitary lodgings in a boarding house! He felt lonesome at the bare suggestion. Uncle Aleck went on:

"I should like to give your wife this piece of advice: The next time you even hint about what is needed in the house-

keeping line, and what is not, and suggest a retrenchment here and a cutting off there, I want her to walk out and give orders to your hired man; tell him how much grain he must give the horses, how much salt to the sheep; how he must scrimp the wheat when he sows it, and the corn when he plants it. She may tell him to tie up the broken harrow with a string, and not go to the expense of having it mended, and shall insist on his going ahead if the plough handle is broken—it is too trifling a thing to stop the work for that. All the fault I find with Phebe is that she did not do this long ago. If she had given you a good setting down at the start, and taught you to mind your business, it would have been a blessing all around.”

It was pretty plain dealing, but it was a great eye-opener to the young man. He sat upon the piazza for an hour in the moonlight, and thought and thought. Whatever his meditations were, one thought was uppermost—he must gain ground with his Uncle Aleck, or his chances were slim. The little talk had, as Mark Twain would say, “knocked more conceit out of him than a fit of sickness.” “Humble pie” may not be very palatable, but it is sometimes just the diet to bring one around right. Slowly and soberly the young man “came to himself,” and then the foremost thought was, “What a wretch I have been! Can Phebe have a spark of love or respect left for me?”

There must have been something good in that youth, or that loyal heart could not have held her affection for him through thick and thin, as she had done. Uncle Aleck’s visit was a godsend to her. He saw a new order of things established in the house, and hung up the three toothed rake in a conspicuous place in the barn as a standing object lesson. Phebe scarcely knew how to get meals in her renovated kitchen, but her face was as bright as her new saucepans.

Phebe soon won back her roses, and went about her duties blithe as a singing-bird. She would always laughingly head her husband off whenever he began to allude to the old times, and “set down naught in malice,” but charged the whole to “our youth and inexperience.”

When Uncle Aleck came back the next year, to the christening of the “little Caroline,” he made out to her the deeds of some valuable property, and added a codicil to his will, in which the ivory picture was bequeathed to this namesake of the fair lady who, to him, was always young and beautiful.

Poetry.

CONTENTMENT.

Nature hath created
Us to joy in life ;
But despair and sorrow
We have made by strife.

We have care and trouble
By our constant need,
And yet God the raven
Well doth daily feed.

Only by His blessing
Grows the golden grain,
For He gives the sunshine
And the joyous rain.

Clothes He all the meadows
With the lilies fair,
That no king in golden robe
Can with them compare.

Why then should we trouble,
Yield to useless fear ?
Ah, perhaps some morning
We may not be here !

Then away with sorrow—
With complaint away ;
Live not for to-morrow,
Rejoice ye in to-day

KÖPKEN.

Facts and Gossip.

CONSIDERABLE difference of opinion exists between the medical profession and the general public respecting the nutritious and medicinal properties of tomatoes. The former appear to think too little of it in this respect, and the latter too much. In a recent article in the *Australian Medical Journal* we are informed that these apples are, to a certain extent, effective against scurvy and the germs of typhoid fever. The article further states that all raw fruit is liable to irritate unless carefully used, and that a person who worked hard all day on raw tomatoes only was seized with inflammation of the bowels, which proved fatal in a few hours. The writer concludes that two or three of such love-apples will be found as nutritious and certainly safer than a dozen. Medicinally considered, tomatoes are

also an excellent substitute for calomel, and can easily be taken when that medicine cannot, and with far less injury to the constitution. Many of the Americans so far prize this vegetable that they feel convinced they are never in health except during the tomato season, and a letter has been published in a recent number of the *New York Herald of Health* from a correspondent in California, stating that the eating of raw tomatoes is a safe protection against ague and bilious sickness generally. As experiments are now being made upon the tincture of tomatoes to test their dietetic and medicinal value, we trust that they will be productive of important results.

A LIFE SPENT IN JAIL.—Charles Langheimer, who is commonly known as “Dickens’ Dutchman,” would make a good study for the philanthropist, the phrenologist, the psychologist, the moralist, and the cynic. Dickens saw him in Cherry Hill Prison, Philadelphia, in the Spring of 1842, a little more than forty years ago. Langheimer has been in prison at intervals ever since. He was liberated a short time ago, and then expressed himself not only as penitent, but as determined to lead a better life. What is the reason that the inbred disposition to steal has never been ground out of this wretched man? What is the reason that in his old age, and with every opportunity given him to lead a free and innocent life, he steals ten dollars out of a drawer? Looked at in any light the spectacle is a pitiful one, a blistering sarcasm upon that something in human nature which some of us are so prone to call divine. This criminal is over seventy years of age. His apathy and shamelessness when reviewing his career, and even in the face of this his latest misdeed, show that no appeal will ever make a permanent impression upon that callous heart. As we said before, the case is one which people fond of making morbid analyses are not likely to forget.

THE loss of memory experienced by Ralph Waldo Emerson during his last years has frequently been spoken of, and a pleasant story is told of him in this connection, showing that something of the element of humour remained with him during times of his difficulty in this respect. As he was going out one day his daughter saw him searching for something which he could not name. She mentioned two or three articles, to which he returned a negative. At length he turned to her with a twinkle in his eye, and said: “It is the thing which people take away.” She at once brought him his umbrella, and all was right.

SACRIFICE is the law of being. It is a mysterious and a fearful thing to observe how all God’s universe is built upon this law, so that, if it were to cease, Nature would cease to exist.—F. W. ROBERTSON.

Correspondence.

PHRENOLOGY.

TO THE EDITOR OF *The Globe*.

SIR,—In *The Globe* for the 19th ult., appeared the following paragraph; as a leaderette, in the “By the Way” column:—“The phrenological heresy still exists, and its professors openly pretend to declare your character and capacity, for fees varying from a shilling to a pound. It seems unjust that the man who tells your fortune by feeling your head does not render himself liable to punishment, while the woman who does the same by looking at your hands is sent to prison for a month.” It may be worth your while giving me a short space in your columns to criticise that paragraph. I should like to know why the holding of opinions different from those held by a majority should qualify a person for imprisonment. Such qualification might be agreeable to some, but surely not to a majority of your readers. There was a time when Christianity was a heresy, and its adherents were “liable to punishment.” But to say that a phrenologist tells fortunes is beside the mark, and to class the phrenologist with the “fortune tellers” is equally beside the mark. That the phrenologist has the power to “declare your character and capacity” is very generally admitted, and when not admitted can readily be proved to the satisfaction of any inquirer. I am speaking from experience. As a teacher of some 20 years’ experience in daily contact with children, as one who has examined hundreds of persons privately and publicly, and as one who has promulgated the truth on this matter at much personal expense, surely I am qualified to give what observation and experience have taught me—valuable testimony on the subject. When numbers of teachers are exponents of the science, when such men as Whately, and Combe, and many others have promulgated it, it will not be trodden out by those who will not give their time or attention to it, and such are those who oppose it. I am willing myself to prove that, if a “heresy,” phrenology is true, by practical examination of the writer of “By the Way,” or anyone well known to himself but unknown to me, and my fee shall not vary “from a shilling to a pound.” The examination shall be gratis.—

Yours, &c.,
J. WEBB.

5, *Belgrave Terrace, Leyton*, August 16.

Answers to Correspondents.

J. J. M. (Stratford).—We cannot tell you where you can purchase callipers to measure heads with. Perhaps some of our readers can. Your suggestion with reference to “giving a series of figures showing the size of the organs of the head of some noted character” for readers to display their “practical skill” upon is not practicable. That and your other suggestion would entail an amount of editorial or professional labour, that an editor could not afford the time to give. Your other suggestions have been answered before.

THE
Phrenological Magazine.

OCTOBER, 1882.

SIR GARNET WOLSELEY.



THE following remarks about the character are deduced from the face as well as from the shape of the head.

The head is well formed, and appears to be well developed in all parts. The forehead is full and broad, the crown high, the back part equally well developed, while there is a good degree of breadth between and about the ears.

Hence there is a fair balance of all the powers ; no superabundance in any particular to give genius ; no special deficiency to cause eccentricity.

All the intellectual organs are full or large. There are specially good observing powers, combined with quickness of perception. The critical powers are equally good. Few men are quicker to see the bearings of things, or to take advantage of them. In addition to critical acumen, Sir Garnet possesses more than common powers for original thought. He takes large and comprehensive views of things ; he weighs everything, and takes into account remote contingencies. This is the quality which makes the strategist. Then he has great organizing powers, arising from large Order, Calculation (though our picture does not show the latter organ so large as some of his photographs), Constructiveness, Causality (as shown by the breadth of the forehead over the centre of the eye), and the perceptive powers generally.

Three other powers, which contribute much to his success as a general, are Wit, Human Nature, and Agreeableness. The first enters largely into the making of a cheerful nature, and cheerfulness begets cheerfulness, and cheerfulness confidence ; and the commander who has the confidence of his army is as one who has the power to make his army equal to double its numbers.

I should like to call Human Nature Insight, for that is the real function of the organ—to give the power of insight into character; and this faculty, the subject of our sketch has in a high degree. He knows men at a glance; knows what they can do, and what they cannot do; and so knows how to turn them to the best advantage. He does not need to spend ever-so-much time to try them, but gets at their capacities instinctively. Insight into character is of the nature of instinct; and those persons who, like Sir Garnet, have a sharp knob or protuberance at the upper part of the forehead, right above the nose and just where the forehead begins to shelve off to the top of the head, have this instinctive perception of character. Agreeableness is somewhat akin to Human Nature, inasmuch as it enables a person to adapt himself easily to others; and one who has the command of men, and has the organ large, can give his orders in a more genial way, and be sure of their being executed with more alacrity than if he acted without the aid of large Agreeableness. Had Sir Garnet been trained for the medical profession, he would have made as good a doctor as he is soldier.

Few men possess so much power to work. He is a man who cannot well be idle; and if he is not campaigning, or at work in some department, he is sure to have some self-imposed task on hand. His entire organization is one that favours action; it would be as easy for him to be idle as for a squirrel to lie still in its cage. Possibly, had he not chosen the profession of arms, he would have had thoughts towards exploration, either by land or sea. His energy is invincible. He has the combative energy of the Gaul, and the dogged determination of the Scot. He loves to be overcoming, and the more opposition there is, and the greater the obstacles in the way, the better he likes it. As a boy he must have possessed the very spirit of restlessness. He has too much benevolence of disposition and general good nature to be cruel or hard, but when his temper is up he can put forth a tremendous lot of force, and there is something in his energy which is contagious. Still, he is not rash, except when he knows that rashness is safe. Few men of such supreme energy are so cautious. He is forethought itself; he looks far ahead and provides for the future, allowing nothing to take care of itself.

Not only does he possess great will power, but, in spite of the gravity of his disposition and the geniality of his nature, he has the elements of pride and dignity. He never lets himself down, and, no matter what his company, he never

allows himself to be put down for less than his full value. Still he is not self-assertive, merely quietly dignified ; but woe the man who brings upon himself the full weight of his anger.

The moral brain is fully developed. Conscientiousness appears to be a large and active organ, and those who trust to his sense of justice do not trust to a broken reed. Be-



nevolence and Veneration are full in development, inclining him to kindness of heart and devotion.

He possesses Imagination in a high degree, and has considerable artistic as well as literary taste and ability.

The social qualities are fully developed, and have a powerful influence on his general character, inclining him

to friendship and sociability. He enjoys the domestic circle highly, and, when work is done, few men look forward to the return home with more zest.

The selfish propensities are full, but not large. He is not a greedy, avaricious man, and could not be miserly if he tried. He values money and property for the power they give and the opportunities they afford for the gratification of higher powers. He is far more eager for knowledge than for wealth; and is not so well adapted by nature for commercial as for professional business. Frank, generous, and open-hearted, he is an enemy to hypocrisy and double dealings of all kinds. Still he is prudent, and has all the qualities for a good diplomatist.

Sir Garnet possesses all the indications of longevity, and should he be spared from the bullets of the enemy, and from the effects of unhealthy climates, he will probably live to a good old age.

Major-General Sir Garnet Joseph Wolseley, K.C.B., G.C.M.G., son of Major G. J. Wolseley of the 25th Regiment of Foot, was born at Golden Bridge House, near Dublin, June 4th, 1833. He entered the army as Ensign in March, 1852; became a Captain in January, 1855; Major of the 90th Foot in March, 1858; Lieutenant-Colonel in the army in April, 1859; and Colonel in June, 1865. He served with the 80th Foot in the Burmese War of 1852-53, for which he received a medal. Afterwards he achieved distinction in the Crimea, where he served with the 90th Light Infantry. At the siege of Sebastopol he was severely wounded, after which he received the Legion of Honour, and the Fifth Class of the Turkish Order of the Medjidie. He was also at the siege and capture of Lucknow, and the defence of Alumbagh, when he was made Brevet-Lieutenant-Colonel, and mentioned with commendation in the dispatches. In 1860 he served on the staff of the Quartermaster-General throughout the Chinese campaign, for which he received a medal and two clasps. He was appointed Deputy Quartermaster-General, in Canada, in October, 1867, and commanded the expedition to the Red River; was nominated a Knight Commander of the Order of St. Michael and George in 1870; and was Assistant Adjutant-General at Head Quarters in 1871. He was appointed in August, 1873, to command the troops on the Gold Coast during the Ashantee War, with the local rank of Major-General. On September 12th, 1873, he and his staff embarked at Liverpool for the West Coast of Africa. Arriving there, in advance of his troops, he commenced his

inland march in the last days of 1873, and Captain Glover in the east, and other officers in the west, were commissioned to raise native levies, with which they were to effect a diversion, as all the separate forces converged on the capital. The Fantees, with few exceptions, proved utterly worthless as auxiliaries, and there was great difficulty in retaining the bearers and camp-followers, whose services were indispensable to the army. The resistance offered by the enemy, though it was resolute and obstinate, was overcome without the occurrence of any serious check. After several skirmishes the Ashantees made a final stand in the neighbourhood of the capital; Sir Garnet Wolseley, on February the 5th, entered Coomassie and received the submission of the King, who agreed to appoint commissioners to conclude a treaty. After a stay of three or four days Sir Garnet Wolseley thought it prudent to begin his return march, and he halted at Adumsi to await the Ashantees' agents. The King's fidelity to his engagements was confirmed by the arrival of Captain Glover with his contingents on the North of Coomassie, though he had not been able to open communications with the General-in-Chief. Captain Glover afterwards marched through the capital to the coast without opposition; and the European troops were re-embarked, in accordance with the original plan, before the commencement of the unhealthy season. The success of the expedition justified the confidence which had been reposed in the Commander-in-Chief. On his return to England Sir Garnet Wolseley received the thanks of Parliament and a grant of £25,000 for his courage, energy, and perseverance in the conduct of the Ashantee War; was created a K.C.B., and was presented with the Freedom of the City of London, and a splendid sword of the value of 100 guineas, October 22, 1874. He was appointed to command the Auxiliary Forces in April, 1874. At the commencement of the following year he was dispatched to Natal to administer the Government of that colony, and to advise upon several important points connected with the management of native affairs, and the best form of defensive organization. On October 2nd, 1875, he landed at Portsmouth, accompanied by his staff, on his return from the Cape of Good Hope. He remained in command of the Auxiliary Forces till November, 1876, when he was nominated a Member of the Council of India. On July 12th, 1878, he was appointed the Administrator of the Island of Cyprus, under the style of Her Majesty's High Commissioner and Commander-in-Chief in the same island. Sir Garnet is the author of "Narrative of the War with China in 1860, to

which is added the Account of a Short Residence with the Tai-Ping Rebels at Nankin, and a Voyage from thence to Hankon," 1862; "The Soldier's Pocket Book for Field Service," 1869, 2nd edition, 1871; "The System of Field Manœuvres Best Adapted for Enabling our Troops to Meet a Continental Army," printed in "Essays Written for the Wellington Prize," 1872; "Marley Castle," a novel, two vols., 1877; "France as a Military Power in 1876 and 1878," in the *Nineteenth Century*, January, 1878.

The later events of Sir Garnet Wolseley's career are contemporary, and hardly need recapitulation here.

E. P. M.

GEORGE COMBE.

CHILDHOOD AND YOUTH.

No name in connection with phrenology is more honoured, or more worthy of honour, than that of George Combe, the first English phrenologist. It is a name, as Mr. Charles Gibbon, his biographer, says, "that is now rarely heard in scientific or philosophical circles—seldom even in those of the advocates and practisers of that system of advanced education for the adoption of which he struggled hard and endured much abuse. But he is still a prophet to many men, and the spirit of his teaching has its place amongst unseen influences on modern thought." Had it not been for him probably the discoveries of Gall and Spurzheim would have been but imperfectly understood in England, and, indeed, amongst all English-speaking people, to this day. Although he approached the study and investigation of phrenology in a spirit of scepticism he was soon convinced of its truth, and became thenceforth its most able exponent, and remained the earnest advocate of its principles to the end of his days.

George Combe was born in Edinburgh on the 21st of October, 1788. His father was a brewer, a man of limited education, but of strong, practical common sense. He was, says his son, six feet and two inches in stature, and proportionately strongly formed in the trunk and limbs. His temperament was bilious, nervous, and sanguine, and his head was large. When George was born, he was in his forty-third year. Of his mother, he says: "My mother was a short, well-formed woman, with a highly nervous and bilious temperament, a dark, fine skin, dark eyes, and fine dark hair, and an energetic step. Her brain was of average

dimensions and remarkably well proportioned, Conscientiousness and Firmness predominating among the sentiments. She had a quiet manner, combined with decision of character, and intuitive good sense. Her knowing organs were rather larger than the reflecting organs. She was in her thirty-first year when I was born. She suckled me, and one child born after me, but her strength then became inadequate to the task of nursing, and all the children subsequently born were sent out to nurse." Her education was even less than that of her husband; she was able to read, but not to write, except to subscribe her own name.

George was said to have been born a fine, healthy child; but while still young he had the misfortune, during a visit to an uncle's in the country, to fall into a brook, and thus, by letting his clothes dry upon him, to contract a cold which impaired his constitution for life.

He received a fair share of such education as was imparted in those days. It consisted in much cramming of the mind with words, with hardly any attempt to communicate a knowledge of things, or to ingraft ideas. "The discovery," he says in his autobiography, "that English words in a printed book were signs of feelings and ideas did not dawn upon me till several years afterwards. One reason of this was that the only significant speech which I knew was broad Edinburgh Scotch, and it never occurred to anyone to explain the meaning of English words to us children in this dialect. An English book was as unintelligible to me, after I could pronounce and spell the words of it, as was a Latin book before I had learned the rudiments of that language." Hence, although he was regularly taken to church in those days, he never understood one word of the sermon. From these causes arose a habit of inattention which he found highly destructive to mental improvement.

There was the same lack of reason in all the educational agencies that were brought to bear upon him. "Neither in church, nor school, nor in the family circle," he says, "was one solitary rational idea communicated to me concerning my own nature, or the nature of men and things, or my own relationship to them. From the pulpit and catechism I learned that human nature was altogether prone to evil, and the knowledge of the world which I gained by induction from this kind of observation and experience [of the evil and inconsistency about him] confirmed me in this faith." The system of education has changed so much for the better that we can say a youth could not to-day grow up under the same untoward influences; but there is yet much

room for improvement in respect of the application of rational ideas to the elucidation of the nature of man and the development of his being, morally and physically.

In October, 1797, young Combe was entered as a pupil in the High School of Edinburgh, where the same system of instruction as that already commented upon was pursued, with the addition of a plentiful application of the "tawse," *i.e.*, the birch. The memory was burdened with Latin words, while but little attention was paid to their meaning. The whole of the teaching was a system of mental and physical torture. Some two years later he attended, besides the High School, a Mr. Swanston's classes for two hours a day five days in the week, to learn writing and arithmetic. Here there was no beating, and some degree of instruction; but, although Combe learned to write a plain, stiff hand, he never succeeded in becoming proficient in arithmetic. He says: "I worked through the rules and performed the evolutions they described with slow, laborious difficulty, and never acquired facility. I remained studying arithmetic long after my contemporaries had passed forward to higher studies. It was in vain for me to attempt algebra; it was an incomprehensible mystery."

The long hours he was forced to spend in study—in winter, at Mr. Swanson's and the High School, from eight in the morning till two in the afternoon, without any interval of repose; and in summer from seven till four and often till six in the evening, with only an hour for breakfast; besides the labours of preparing lessons at night: this, the lack of proper food and exercise, in winter insufficient clothing, and generally the prevalence of insanitary habits and conditions—undermined his health more and more.

Parents may learn a lesson from Mrs. Combe's ignorant but well-meant method with her children. "My mother," says Combe, "had been taught that oatmeal-porridge and buttermilk were the best food for children for breakfast. The buttermilk was bought in large quantities from dairymen's carts in the street. Frequently it was not fresh when bought, and it daily became more acid when kept. To my delicate stomach it often tasted like vinegar, and I revolted at the porridge. In my mother's eyes this was fastidious delicacy of taste, and she ordered the porridge to be kept for my dinner. . . . My mother was not so severe as she had threatened to be, for she gave me a dinner I could eat; but she never failed to have the porridge served in the morning. In all this she was actuated by a sense of duty alone, for she was ever aiming at our welfare. Ignorance

was the rock on which her kindest endeavours were wrecked, and she was not to be blamed for not knowing what nobody else in her rank, or, so far as I have yet discovered, in any other rank of life then knew."

Combe traces to these bad influences, not only a general deterioration of constitution, but some permanent structural injuries. "The bones," he says, "were imperfectly developed ; and bent clavicles and a slight distortion of the spine, with chronic irritability of the mucous membrane of the lungs, were the consequences." To the suffering caused by his inability to sit upright, during the long hours of confinement at the High School, on the backless seats, he attributes the distortion of the spine.

When he had attained fourteen or fifteen years of age, young Combe began to be troubled about religious matters. Although brought up very religiously, and though Sundays were given up to church-going, to the Catechism, and to Bible-reading ; yet no word of explanation of anything was given. "These Sundays," he says, "came after weeks of severe mental labour which overtaxed my brain, and they were felt as a heavy addition to the toilsome load of learning unintelligible things which oppressed my existence. Far from cultivating a religious spirit in me, they made the church, Sunday, and the Catechism odious." He goes on to say : "In everything I was earnest and sincere, and tried to believe it all ; but the more I believed the more unhappy I became. I saw no ground for doubt ; for, as already mentioned, the whole world appeared to me to reflect the Fall and the sinfulness of man from every feature. . . . Some persons were elected to everlasting enjoyment in heaven ; many more passed over by God's decree, before they were born, to everlasting torment in hell. I included myself at once in this category." No explanation of these matters were given to him either by his parents or any of his teachers.

In 1801 his four years of suffering under Mr. Fraser, his master at the High School, came to an end ; and he records that so painful was the impression left upon his mind by this old-school pedagogue that, for years afterwards, he crossed over to the other side of the street whenever he saw him coming, in order to avoid passing near him. In October of the same year he was entered as a pupil in the same seminary, but under the rector, Dr. Alexander Adam, who was a great improvement on Mr. Fraser. "He taught us something," says Combe, "spoke kindly to us, and beat us gently and never without reason." At the end of September, 1802, he quitted the High School for ever ; and he says of it : "My

feelings were now much softened towards it. I respected and even loved the venerable, kind-hearted rector ; and under his sway, being freed from terror and the constant irritation kept up in my moral faculties by the harshness and injustice of my former master, the beauties of the Latin classics opened upon me, and I enjoyed many pleasant hours with Ovid, Virgil, and Horace, even under all the disadvantages of the literal and tame translations and monotonous repetitions of the school-room. In looking back on those five years of youthful life wasted at this school, my regrets are doubled by the reflection that had I been taught rationally I had both inclination and capacity to learn."

In November of the same year Combe entered the first Humanity Class, under Professor John Hill, in the University of Edinburgh. About the same time he was sent to learn geography and mathematics under Mr. Robert Darling ; but here again the same error was manifested : teaching consisted in simply burdening the memory with words, with but little attempt to explain or elucidate. The result was that the pupil learned little of geography, and not much more of mathematics.

In November, 1803, he entered Dr. Hill's second class for Latin, and, although he made no progress in acquiring the Latin language, he derived much pleasure from hearing the Latin classics read and explained. He was moreover of opinion that they furnished him with a standard of taste and an interest in literary composition, which stood him in good stead at a later period. Cicero's Orations were his chief delight, and he could read a few of them with ease. During these college years George employed some of his spare time in instructing his younger brothers and sisters in reading, writing, and arithmetic ; but he records with regret both his inability to improve upon the educational system of those who had taught him, and the poor stock of acquired knowledge from which to teach.

Young Combe was now considered of such an age that it became incumbent upon him to go into some kind of business in order to aid in the support of the family. Accordingly, in 1804, he was apprenticed to Mr. Alexander Dallas, of the firm of Higgins and Dallas, writers to the signet. Here he soon became painfully conscious of the defects in his education, and set to work to remedy them. His fellow apprentice was George Hogarth, afterwards musical critic to the *Morning Chronicle*, and father-in-law of Charles Dickens. Hogarth was much better educated than Combe. Among his other accomplishments were French

and stenography, in both of which he instructed his fellow apprentice. "This," says Combe, "was the first real teaching I had enjoyed, and I may say that George Hogarth was the first person who recognized in me any capacity above common-place, and who incited and encouraged me to improve.

THE STUDY OF PHRENOLOGY MADE EASY.

CHAPTER I.

The human mind has been investigating truths, as applied to matter, mind, and life, from the earliest dawn of observation and thought. Man has been gradually approaching the truth from the first, although often getting wide of the mark. Long before what we know as the Christian era, great steps in advance had been made in the knowledge of mind and matter. So much was this the case during the height of the Greek and Roman civilizations, that it appeared to some minds that the acme had been reached, and that the human mind could go no further. Some apparent justification for this opinion was afforded in the strange spectacle which followed the decadence of Greek and then of Roman civilization. Learning almost ceased to exist, and a kind of eclipse seemed to fall upon the human mind. This state of things reigned for long years. But after a while there was an awakening—a new birth of the spirit took place, and then not only were the stores of ancient learning ransacked, but inquiry and investigation opened in new channels. But with every fresh development of truth there were those—undeveloped minds—who thought that now all truth was learned, and it was not only useless, but profane to attempt to search out more. They were for ever wanting to put up the barrier: thus far. This is the sign of the narrow, undeveloped mind.

The ordinary intellect is so circumscribed, when compared with fundamental truth, that it is continually deceiving itself, thinking that it comprehends the whole, when in fact it only imperfectly comprehends a small portion of a truth. It is not able to go one step back towards the origin or fountain of truth, or to go forward and contemplate the final result of its perfect application.

The mind in comprehending a subject is like a man going round the world. When he comes back he says, "I have been round the world and seen it all"; when in fact he only saw a little way on each side of him, which would be but a few miles when he was awake, and when it was light; while on the

trackless ocean he saw nothing permanent or twice alike. So some men have comprehended as much as they could of a truth, subject, or science, and in their conceit think they have taken in the whole of it and seen it in all its bearings ; while to understand an atom, a ray of light, a primary colour, or the smallest application of force is almost to understand infinity itself. The human mind is not so conditioned as to be able to take in a whole truth or principle at first and at once. When the race has finished its course on earth and left its record in the archives for Divine inspection, He will be obliged to say,—“ Poor, weak child, you do not know your letters yet ! ”

Agriculture has been pursued from the days of Cain till now, and yet it is very imperfectly understood. The same is true of economy in a personal or political sense ; also of growth, dietetics, and the laws of health.

Truths and principles, as applied to the above subjects, are easily understood when compared with the more difficult subject, the study of the mind. The greatest philosophers and most vigorous and original thinkers of all ages have done their best to explain mental phenomena, and still it remains a mystery even to the most enlightened men. All writers on the subject, however, have gravitated in one direction. They all, step by step, bring the mind nearer home, and make it more and more dependent on human organism, and give it special locality, divide the mind into different parts, powers, or faculties, and give each faculty a special labour to meet a want of man. The approach to the divisibility of the mind and the localization of the faculties was constant and unchanging until the original untrammelled mind of Dr. Gall observed the relationship between the shape of the brain and the peculiar manifestations of the mind. He followed up his observation until a system of divisibility of mental powers, with their dependence on certain nerves of the brain, was the result.

From the first great opposition has been manifested to this new system from two classes of professional men, and all manner of objections have been brought against this arrangement and disposition of the mind ; and after these objections have been removed, one after another, the objector falls back upon the assertion that it can never be proved to be an exact science, and therefore it is unworthy of respect. The same objection is not raised by these objectors to medical science, theology, or other branches of study that are in as crude a state, and yet they are relied upon and put into practice by these very objectors, who even get their living by them.

No science is more exact than physiology, if perfectly understood, and, although the reasoning applied to both are the same and the principles are synonymous, yet this similarity is not recognized or made any account of.

Dissection demonstrates the truth of physiology, but the same truth cannot be applied to Dr. Gall's system in the like subject, nor in any way can dissection prove the relationship between brain and mind any more than it can prove the relationship between the brain and the different faculties as given by Gall's system, yet the brain is admitted to be the organ of the mind, while the location of the different faculties is rejected.

The discovery of most of the phrenological faculties and their location in certain nerves of the brain, with their definite locality in the head, was made by Dr. Gall, while Dr. Spurzheim made great improvements in analyzing, classifying, and arranging the faculties thus discovered. Some discoveries and improvements have been made by others, notably by George Combe, since their day, but the fundamental principles remain as they left them.

Drs. Gall and Spurzheim left an undying legacy to the world to the end of time in the science of phrenology, based on the following principles:—They started with the self-evident thesis that every function has an organ, and every organ a function, and that every nerve has its own special function to perform, as well as its relative locality in the organism, whether in the body or brain. They showed that the nerves of the brain are distinct from each other and have their origin in the *medulla oblongata*, and can be dissected from that fountain, up and out in all their ramifications. They then advanced to the principle, that the brain is the seat of mental sensation, and that the mind is dependent on the brain for its manifestation, and that there is no manifestation of the mind without the brain. That the mind is composed of distinct faculties or powers, having a special adaptation to a want, condition, or relation of man to himself, to mankind, or to his Creator and a future life.

THE older I grow—and I now stand upon the brink of eternity—the more comes back to me the sentence in the Catechism which I learned when a child, and the fuller and deeper its meaning becomes: “What is the chief end of man? To glorify God, and enjoy Him for ever.”—THOMAS CARLYLE.

THE PHYSIOGNOMY OF THE NOSE.

BY J. SIMMS, M.D.

The nose, which appears as the central feature in every human face, has two important functions. It is the channel by which the external air is carried to the lungs for the purification of the blood, so necessary for the support of animal life; and it is the organ of smell, by which the system is guarded against receiving injurious food or unwholesome exhalations.

Happily, the mouth furnishes a supplementary passage for the supply of air in case of any stoppage in the nasal orifices; but, when possible, all breathing, and also sneezing, ought to be done through the nose as the proper channel; and, as the amount of life-energy in every individual depends on the amount of air received into his system, so all those talents and dispositions that make up what we call energy of character are revealed in the size and form of the nose.

The head and nose exhibit signs of thought, and those signs are more obvious and reliable in the nose than in the head—first, because the head, being covered with hair, is less easily scanned; and second, because the skull is so much less flexible, that it does not readily alter its size or form, as the consequence of changes which take place in the mental character.

As the rays of the sun can soften and change a snowbank more readily than a rock, so can the rays of thought from the mental sun within more speedily mould the soft nose and other facial features than the hard bones of the skull; and every change of mind will affect the fleshy sooner than the bony parts, causing them to keep pace more closely with the variations of character, and thus to become a truer index to the inward workings of the mind.

The most casual observer need not be told that noses are to be seen in every variety of size and form, to say nothing of colour. They are long and short, thick and thin, round and square, crooked and straight, bent up and bent down, red and white, spotted and plain; presenting a greater number of obvious and nameable characteristics than any other feature. And each of these means something to the physiognomist. As the mouth indicates chiefly the supplying powers, and the eye the social affection, so does the nose the mental energies, and all that has a tendency either to sustain or deteriorate them.

As a general principle, then, large, long noses are indicative of active, energetic characters, apt to be proud, pompous, impatient, desirous to be leaders and commanders, and often overbearing and tyrannical. Alexander the Great and Napoleon I. are notable examples.

On the other hand, persons with small, low noses are weak characters, deficient in government, even of themselves, and prone to follow their appetites, desires, loves, and hates, rather than their reason and judgment.

Large-nosed persons in a critical position, or under circumstances of excitement, will be more self-possessed and competent to judge and act wisely than the small-nosed. Large noses are found chiefly among the inhabitants of mountainous regions or their descendants. Small ones originate in low, level lands.

When the nose is long in proportion to its general size, the individual is discreet, careful, timid, and thoughtful. Noses that are relatively short from the forehead to the point, belong to rash, careless, self-willed people. Noses that reach far away from the face, denote persons discontented with their present lot, aspiring and anxious. But if the point of the nose seems clinging to the upper lip, we infer a tendency to the miserly, and a love of earthly things.

When a nose is thin, as well as generally small, the constitution is poor, as well as the character weak; there is a tendency to consumption, and such may die early. On the other hand, if the nose is thick where it joins the face, there is a strong constitution, strong passions, too, and reason to hope for long life if proper care be taken.

Sharp-pointed noses accompany intense, keen, penetrative persons, with quick tempers. Those that are thick and nearly square at the point, denote a taste for invention and progress. A prominent nose, nearly or quite straight, and which seems to have two points formed by a vertical depression down through the end, denotes a meditative and logical mind.

This may be observed in the busts of Lord Bacon, Sir Isaac Newton, St. Vincent, and Auguste Comte.

A man with a nose reaching towards the mouth will be cautious, and his bodily wants his first consideration. Noses that reach in a straight line forward at the base, indicate quiet persons, and of regular habits, especially in middle life. Round noses belong to the musical, the speculative, and those possessed of retentive memories. The small, low, round nose, generally known as the pug, turning up a

little at the point, belongs to a forward, conceited, and saucy individual.

The nose that shows a large amount of bone in proportion to its size, denotes a stable character, slow of judgment, but firm and reliable; but the soft, fleshy or gristly nose leads us to fear we have a sly, deceptive, cunning, treacherous character. The former originates for the most part in temperate climates, the latter in the torrid zone. Examples of the gristly nose may be seen in the cat, and all the feline species.

The straight nose inclines to science, art, polite literature and political economy, if educated accordingly. But that which shows a convex form from forehead to point, inclines to commercial enterprise. A nose very broad at the base evinces a dull, obtuse intellect, with much physical courage, animal power, and destructive inclination.

When the lower portion of the nose forms an obtuse angle with the face, and the point is elevated about forty-five degrees, we have a person inclined to snobbery and fashion. When the septum or partition between the nostrils is longer than the sides, we infer an original, fertile, suggestive mind.

A nose standing out high, and thin in its upper part, bespeaks moral courage, love of argument, a quick apprehension, capacity to make the best use of what they know at the time being. Widespread nostrils are indicative of strong lungs; but the closing of them evinces pulmonary weakness. Wrinkles lying across the top of the nose are signs of thoroughness. A fiery red, warty and enlarged nose, betrays a diminution of energy through disease or strong drink.

Long, sharp, and well-formed noses possess acute scent, provided they are not subject to catarrh, or that running of mucus which arises from great susceptibility of cold in this organ, and which is detrimental to the special sense of smell.

As a general rule, square noses indicate a masculine, and round ones a feminine character. Animals, as well as human beings, with long noses, are uneasy, watchful, and desire to travel. Those with short ones are slow of movement, as the sloth. If the bridge of the nose is high, it evinces a disposition to assail those who are considered to be doing wrong.

Another rule which holds good among the lower animals, as well as the human species, is that those with wide faces, and noses wide where they join the face, are fond of flesh meat, while those with long, narrow faces prefer vegetables,

fruits, and nuts. The tiger and other feline quadrupeds furnish good examples of the former; the horse, ox, camel, giraffe, deer, sheep, and goat exemplify the latter.

Those human faces that are largest in the upper portion are naturally herbivorous; but if the lower part is relatively large, there is a disposition to eat flesh. The same applies to the nose.

The Rev. Morley Punshon, President of the British Wesleyan Conference in 1874-5, had the wide, full face indicating the appetite for meat diet, and it is said he always declined eating fruit of any kind; and being once offered a sovereign to eat an apple, he still refused. Mrs. Hannah Stocks, a lady who lived in the West Riding of Yorkshire, England, but who has passed away, was another example. Her face was wide, and her nose broad at its junction with the face. Her daughter informed me that this lady lived principally on meat and beer; she rarely used either bread or vegetables, and as for fruit, she seemed utterly unable to eat it. She had been known to try it, but the taste of an orange seemed utterly repulsive and offensive.

If enough has been said here to cause the reader to observe noses, there is, at least, the first step taken in the course to which I earnestly desire to lead all who read or hear my remarks. The remainder must be left to himself; my great hope being that these observations may lead to showers of blessings on future generations, by helping to emancipate the human family from the thralldom of materialistic theories and humiliating imitations.

In conclusion, let me say to the reader of these lines: If you have a badly-formed nose, one that is thick at the base and hugs down towards the face in a manner too truly indicating a low and selfish nature, do not settle down in this character, assuming that you were so formed by nature and cannot help it; but rouse yourself to commence living to higher and nobler purposes; deny yourself all indulgence of envy and revenge; refuse yourself all gratifications that are merely selfish; and, however contrary to your inclinations, compel yourself to make sacrifices of time, ease, and money for the good of others.

The love of such actions will grow with the practice; through time you will find pleasure in what was at first against your nature; the more good you do, the more you will love to do it; the oftener you deny yourself, the easier self-denial will become. Smile not with incredulous contempt when I add that your nose, with Nature's wonted truthfulness,

will publish to the world the fact that you have become nobler and better.

Continue thus to improve throughout life ; and when you pass to another and better state of being you will be happy to find that your time on earth was not spent in the indulgence of selfish and debasing passions ; but your powers of mind and body were, like clay in the hands of a skilful potter, controlled, worked, improved, and rendered at once beautiful and useful ; adapted for usefulness in that future state of existence prepared through the illimitable kindness and wisdom of the Creator.

LECTURES ON PHRENOLOGY.

BY DR. SPURZHEIM.

LECTURE XVIII.

I come to-day to a very important application of phrenology—namely, to Education.

Look at man in general, and see what a wretched state he is in ; he requires to be treated almost as a child, and yet writers have told us that the world wishes for education.

Many books have been written on education, whole libraries have been compiled, various institutions established, yet very little improvement has taken place. Can man be perfected by education, or can he not ? It is certain that the improvement is not proportionate to the trouble which some individuals have taken. Therefore, I repeat, can man be perfected or not ? Or shall he remain eternally what he is ? In speaking of the perfection of man, I do not mean to say that man can, by any power whatever, acquire any one of the fundamental powers of the mind, because the number of them is determinate ; but the question is, whether these powers can become more or less active, and whether they can be directed in a way likely to be most useful to the individual ? Commonly, in speaking of education, it is divided into two parts, physical and moral. Since we admit that the moral part of man, or, in other words, the mental part, depends upon the organization, and since we do not admit of any influence independent of the cerebral organization, I do not like this division, and, therefore, shall not speak of it.

However, I shall speak of education under two heads. I shall first examine how far it is possible to give more or less

activity to the fundamental powers with which man is endowed, since we admit in phrenology that man has received from the hands of the Creator a certain number of powers, and that these powers are manifested under certain conditions. Now we see that many powers are more active than others, and that, in a general way, the animal powers are more active than the powers proper to man. Is it possible to give more or less activity to the individual powers? that will be the first question.

I shall, secondly, examine how far it is possible to direct these powers. What shall we do if we find persons born more active than others? There are various conditions which must be observed. Man is a created being, and he must be studied in the same way as all other created beings—by observation. Nature makes no exception to her general laws, although we wish to make exceptions much more frequently than is necessary. Although the subject may appear delicate, I shall insist upon it. Man must be improved in many respects, as all other created beings. Are we not sure to have good cattle, a good breed of any description, by attending to certain conditions; but are we sure of having good children? We can calculate, in a general way, that we shall succeed just as we like with animals; but can anyone say I will have such and such children? We are the rulers of nature; man knows that he must submit to certain conditions, for he does not find that he can create; hence he submits to conditions. With respect to his own race, he thinks he is capable of making exceptions, and he is punished for his pride. The matter is delicate, and I shall inquire only into the laws of creation. With respect to our being we must submit to the will of our heavenly Father, but we wish to become the masters. If an agriculturist wishes to cultivate plants, trees, and fruits, how does he proceed? Does he not train his trees and place them in certain situations favourable for his purpose? and he is sure to succeed. To come to animals; we know that they are submitted to certain natural laws, and these laws must be submitted to trials.

I now come to the most delicate point that can be conceived by those who have attended to the laws of the body. It is certain that the whole of the constitution is propagated from parents to children, and you may perceive that I allude to the laws of propagation. This is the most important of anything a man can attend to; and if the time should come when the laws of propagation shall be attended to, more good will be done to perfect man than

hitherto has been done by all the institutions and by all the teachers of the present or past ages, not only with respect to individuals but families and nations. The body has its laws, and if the manifestations of the mind depend upon the body, the laws of the body must be observed if we wish to arrive at a perfection of form or of endowments of the mind. The ancient legislators were all aware of this, and the ancient Spartans were celebrated for their symmetry and strength ; but I shall not enter into the subject here ; I merely call your attention to it to show that we must submit to certain natural laws. The body, you see, has its laws, and are there not various hereditary diseases ? But we look to a fine form and to money, and forget all the other things. People are satisfied with a fine figure and money, I say ; very well, do not complain of the consequences even with respect to intellectual powers ; but if you regard merely the physical development, something more than money and a fine figure must be attended to. Some beings appear born for each other, but the longer they are together the less they like each other.

I shall merely enter into this matter in a general way. The powers wish to be satisfied, and as some of these powers are active, and find they cannot be satisfied, then the parties are displeased ; and even when persons live together in society, and find the powers cannot be satisfied, they are displeased. A villain does not like to see an honest man, and a just man does not like one who is unjust. Every one must know his own powers, and he must look for the same powers in another, and then such persons will live in peace. Moreover, the diseases of the body exist and have an influence on the children ; and if every one will reflect for himself, he must see that there are certain configurations propagated from parents to offspring, and if parents have small brains, small brains will come. There are talents in all families ; but are there certain faculties more active in certain families ? You will, perhaps, be inclined to admit that there are. Now, if you see persons who, in the third generation, have a great tendency to become consumptive, and, perhaps, like their predecessors, die of consumption, do you think that Moses was right in preventing promiscuous marriages with even the third and fourth generations of such families ? The ancient legislators attended to the laws of propagation and degeneration. Some families intermarry with each other, and have you been attentive to the result, a result attempted to be guarded against by the Mosaic law ? Degeneration is the consequence. What do you do in nature ? Does the

naturalist continually sow the same seed? Does the same tree thrive in the same soil, or does he find it necessary to change the seed and change the soil? Does he not find it necessary to cross the breed in animals if he wish to preserve the integrity of the race? But nothing of the kind is attended to in man. I might go so far and ask whether those families, in which the breed is crossed, show more talents than those in which it is not? Or I might, perhaps, even go to nations. Those who have the opportunities of observing will see that the human form is influenced, and that the feelings and intellectual powers are modified by certain conditions, and thus we arrive at the confirmation of that with which we set out, that the human form does change and must change.

I come to the second consideration, or to that which is commonly called physical education, but since this is spoken of in many books I shall say nothing of it. As soon as a child is born, and even before, the physical education must be attended to, for if proper nourishment be not afforded, the brain will not be developed with vigour no more than other parts of the body. There are some who say that the milk, by which the child is nourished, can give certain dispositions, but I doubt it. I say that if the milk could produce such results, then many adults might be excused if they returned to their original article of diet. You may feed a child with the milk of other animals, but that will not produce in it the feelings of those animals. Perhaps we may presume that the climate has an influence on the constitution. The climate is often spoken of, and, in treating of the intellectual powers, I admit the influence of climate in producing peculiarities of organization, inasmuch as some climates are more unfavourable to the growth of the body than others; and that it may encourage the development of certain powers and retard others. I can conceive that in the milder climates the intellectual powers are calculated to act with more activity, and so far I am disposed to admit the influence of climate on that power. Nourishment, then, contributes to the greater development of the individual organs, and as some climates also favour the growth, and since the powers depend upon the organization for their perfect action, we can see how, in a secondary way, the mind depends upon the climate; but climate is not everything. Is it, however, merely climate that makes the difference between the Hindoos and English? or is it done by propagation? The Jews are distributed all over Europe, but have they changed their features? They are so peculiar that they

may be known from every other people ; and what is rather singular, even the two tribes of Judah and Benjamin may be distinguished from each other, although many thousand years have elapsed since their separation.

How many years are necessary to change the constitution and the powers of man, the laws of propagation being attended to? Perhaps it may be that certain aliments are more congenial to certain parts of our bodies ; we observe the influence of various agents on the nervous, vascular, and muscular systems, and this is a point to be attended to : to see if something more cannot be done for the education of the mental powers, by phrenology, than has hitherto been done.

I come now to another point which is very little understood, although apparently so simple, I mean the exercise of the powers. We must admit that our powers may be exercised, and that they may be made stronger by exercise. We can do so with the muscular actions, and we can do the same with the external senses. Every power being exercised acquires more strength ; hence, if we wish to give more activity to the intellectual faculties, let them be exercised and they will become stronger. If they be too strong let them be quiet, and if not strong enough exercise them. But this is not done by the present mode of education ; and this serves to show that the fundamental powers of the mind are not understood. Teachers complain that they cannot cultivate the feelings so much as the intellectual powers ; that may be ; if a proper method only be adapted they may be exercised even more than the intellectual, but not in the way now done. Suppose I see an individual who has a perfect figure and good muscular action, and I wish him to become a rope-dancer ; I say to him, Here is a book on rope-dancing, you will learn from this how to exercise your muscles, how to acquire the art of balancing ; read it through very carefully, and in the end I hope you will be a good rope-dancer ; I would say to another, Here is a treatise on music, read it through, it is a perfect treatise, learn it by heart, and you will become a good musician ; to another I say, Here is a work on painting, you will learn from it how to mix colours, and in the end you will become a good painter ; but give the would-be rope-dancer no exercise, let the young musician hear no tunes, and let the young painter see no colours, and will the education produce the intended effect ?

Again, we have works written upon the feelings ; we are told to have charity, to cultivate veneration and benevolence,

and children are made to learn them by heart ; by doing so the verbal memory merely is exercised, but the feelings remain as before. Exercise is the putting into action. Speak to a child of hunger and thirst, and give him very correct explanations of the terms, yet he will never know what they are by such explanations ; but give him little to eat and to drink and he will soon know what they are. Say nothing about benevolence and charity to a child and take him to see poor, suffering beings, and make him suffer a little also, and he will soon learn what benevolence and charity are. The powers must be put into action ; and when you recollect that there are thirty-five powers to be exercised, you will see the importance of attending to this mode of education. In the same way the reflective powers may be exercised. Each power must be exercised for itself in order to perfect it, and it can never be done by exercising another power. In learning by heart, the reflective powers are not exercised, only a mere verbal memory ; words are retained without any ideas being attached to them. Now it is an important point in education to know what degree of exercise to give to each power, not too much nor too little, but just as much as it can bear without fatigue ; just as some persons can walk two miles, others only one, and others again are fatigued with half a mile. The powers being individually more or less active, let them be exercised according to the degree of their natural strength. We are sometimes astonished at the premature genius displayed by some children ; the talent is encouraged too rapidly, it reaches speedily to the highest degree and then as suddenly sinks.

Whenever you see great powers manifested by children take care that you do not too rapidly exhaust them. It is a general rule that the weaker children are the more precocious, and they often die too soon ; but the object should be rather to repress that inordinate activity of the talents, and manage the growth and support the animal powers a little more, and then the future man will, with a strong body, display powerfully the manifestations of the mind.

It is a saying of the ancients, *mens sana in corpore sano*, and the body must be attended to, and the period for exciting the intellectual powers must be attended to. All teachers must be aware, that one power becomes active at one period, and another at another ; but see here what can be done by education. We have shown that the organs of individuality and sensuality* are first active among the intellectual powers,

* Dr. Spurzheim here uses the word sensuality in its primary meaning, namely, that of perceiving through the senses.

and we observe how anxious children are to acquire a knowledge of the beings around them. They look attentively to things around them and endeavour to become acquainted with their nature and qualities, and then they begin to pay attention to signs and words ; but, in the ordinary mode of education, words and signs are attended to and the meaning is lost sight of. You will see some children amused with learning words, whilst others will look for plants, and stones, and minerals, and so on, and are better pleased with them than books ; but then the master comes and punishes them for their talent, and makes them go to school to learn Latin and Greek. The powers may each be cultivated by attending to circumstances ; and some situations and pursuits are more favourable to the exercise of certain powers than others. A man may study the ancient languages and may succeed very well with them ; but must every man be a classical scholar to become a great man ? Or can you exercise reason, that is to say the powers of comparison and causality, in any other way than by learning languages ? You may see a great mathematician, a man of deep mind, perhaps : will you say that every man must study mathematics in order to obtain a reflective mind ? I say that comparison and causality may be exercised in mathematics as well as in languages ; but might they not be exercised in any other way, by natural history or various branches of philosophy ? Shall we condemn an individual to learn Latin and Greek whose power of language is very small, and who can never therefore become a good scholar ?

We should know the value of all the powers and cultivate them, but not make every man cultivate them in the same way. If a man have the powers of language large, let him study the ancient and modern languages ; and which are the most useful ? I am very sorry to say that we judge of a man, who has received a liberal education, by his knowledge of Latin and Greek rather than if he have cultivated his own language. I should like to know whether the modern languages have the same spirit as the ancient ; whether we write English as they formerly wrote Greek. But do not misunderstand me ; I have no objection to any branch of knowledge ; but my observations are now limited to children. Do not let the useful knowledge be neglected ; if there are many powers let them all be exercised, I have no objection to that ; but let the powers which exist, provided they are but few, be cultivated, in reference to the future destinies of the individual, by which they may be made most useful to him. Every power must be exercised for itself, but I would

ask whether every man must study mathematics to become a preacher of morality and religion, or even become a medical man? If this be true, after the necessary knowledge has been acquired, let the other subjects be studied. Whilst all the books were written in Latin it was necessary to know that language, and if a man wish to read the doctrines of physic in the original language, as by Hippocrates, he must learn Greek, and so it will be necessary to learn the modern, more particularly the French and German; and comparison and causality may be exercised by each.

One observation more with respect to exercise. Is it probable that the individual organs of the cerebral functions increase by exercise? I admit that the brain is an organized part and submitted to natural laws in common with every other part of the body; it is nourished by the circulation of the blood, and there is more blood runs to it than to any part of the body of equal size; and in proportion as any part is exercised, so there is more blood sent to it, and it is found to increase in size; but this is not the most important thing. The faculties show more energy by exercise, and a greater energy if the volume of the organ increases; there is no ratio between the increase of activity of a faculty and the increase in bulk of the organ. The muscular power may be increased wonderfully by daily exercise; and a person may, by exercise, be able to accomplish a journey which he would not at first have dared to attempt; but there is no proportional increase in bulk. The fibres of the brain become also strengthened by exercise. Do not teachers find, when children return from their holidays for four or five weeks, that they are not able to get through the same lessons which they did when they left school? It requires some time for them to come in again, and then there is activity. Exercise has some influence on the development of the organ, but its greatest influence is on its degree of activity. Hence, then, the point should be to attend to the exercise of the fundamental powers, and to exercise each power for itself.

I now come to another consideration which contributes to give greater activity; it is that of the mutual influence of the powers. Many powers are always active by their natural energy, and we may excite others by them. We all know what emulation is; the love of approbation is put into exercise to excite other powers, to give activity to them. The love of approbation may be excited to make a soldier fight; it may be employed to excite benevolence, and even in this way we may employ one power to excite another.

The solicitation of the powers belongs, in a great measure, to the science of mnemonics—namely, that of one power exciting another. Now what is memory, according to phrenology, but a higher degree of activity in the individual intellectual powers? Those who teach this art take first one power and then combine it with others. Suppose we see a certain object which recalls to the mind the recollection of something which ought to be done; this is an example of what may be done by mnemonics. I know a gentleman who told me that he could never think of anything without colour. I should say that, in him, the organ of colour would be the exciting organ for the exercise of mnemonics. Then comes the intellectual powers, and then we have to try how these can be brought together in order to excite or prevent the others, and to do this phrenology must be perfectly understood. Then we have to set the animal feelings against the feelings proper to man; the feelings against the intellect, and the intellect against the feelings, and the feelings against themselves. These, then, are the four means of giving more or less activity.

Let us proceed to the second part of education, to the direction of the powers. How shall we direct them? Shall the animal predominate, or shall man at once become the master? I would say, let the powers be employed under the direction of man, let all the other powers be subservient to such as are proper to man; these must be guided, or they must guide. Veneration is not to go alone, nor benevolence alone, but they must go altogether. I know that this will be a long time in performing, if it be accomplished; but I consider that in all situations this direction is important to the happiness of man; and as long as the animal feelings remain unsubdued so long will the misery of mankind continue. Hence we want to know how it is to be accomplished. We must all be aware that everyone, in infancy, acts by motives; and if you wish children or adults to act in a certain way, you must present some motive to them. Now although the powers are essentially the same in the mind of every man, yet, as some powers are inclined to be more active than others, the same motives will not succeed with all. To some, the mere justice of an act may be a sufficient motive to perform it; others must have different motives; they would not look to conscientiousness only, they would be inclined to act with acquisitiveness, and so with the rest. There are various motives, and these differ in their influence on individuals according to circumstances.

As we are directed by the apostolic maxim to adapt

ourselves in our conduct to the capacities of others, and be all things to all men, so it would be of no use for me to speak to anyone of causality. If people were to consider this subject more, much of the time thrown away in education might be saved. We must know that the motives are active according to the degree of the different feelings, then we must know that each power gives a tendency to an action, and that these tendencies must not be confounded with their application. I have seen a child very proud; the parents prohibited him from commanding the servants, and told him he must be kind to the servants, and this child has the power of commanding very strong; and when that is the case, I should say take care, and you should take further measures to prevent it. We often lament the influence of vanity in the adult, but we forget that it exists in children; if we praise a child for his fine air, his fine dancing, and accomplishments, do not praise him too much, and do not flatter him too much. It is often by encouraging little things that habits become confirmed. If you see a child inclined to tell lies, or fibs as they are called, in joke, do not encourage such fibs, for, if you do, he will grow up a confirmed liar. A child may begin by stealing an apple, and afterwards other things of more consequence. Do not let the powers, in their direction, be confounded with their application. As soon as a power becomes too active, exercise a check over it, by exciting another power, and then do not confound the power with its application.

Another important object to be attended to in education is, that every individual is endowed with different degrees of faculties, that is, a great study, and that education gives no power, therefore we have to cultivate the powers as they exist. We lament very much in society that so many things are done as they are; we find even that education does not control sufficiently the natural propensities, even in those persons who have strong intellectual talents. It must be borne in mind that the powers are given, and that education, although it may, if properly directed, cultivate the powers, can never create them. Again, the powers, being observed, should be directed into a proper channel, and this can never be done until persons are acquainted with the nature of the fundamental powers of the mind. A man may be a good mathematician but a bad moralist, and yet such a man is brought up to the church; and you know there are many preachers who say You must do as I say, and not as I do. Persons fitted, by nature, for soldiers are brought up to the gown, and the reverse. Employ every individual

according to his natural gifts. The priests, who, during the dark ages, had the management of education, knew the importance of attending to this, and they directed the youths submitted to their care into such pursuits as they saw they were best fitted for.

I am obliged to give but a general view of education, and so far I have fulfilled my promise; but, before I take leave, let me remind you of the difference between the dispositions of the mind, of which I have spoken, and the actions of man. As far as examining the dispositions may go, I would say that you can judge of them by the general size of the head, and by the constitution, and you will be able to judge of their activity by the natural language before described. But, if you dare to speak of actions, as beginners in phrenology are disposed to do, or to arrive at a knowledge of character, then you must not only consider the size and other conditions, but you must take into account all the particulars, such as natural dispositions, exercise their mutual influence, and the exciting causes. Do not confound the powers with their applications, and I am satisfied, that whoever studies phrenology will be convinced that it is a science founded on nature, and will prove beneficial to mankind.

ILL-FITTING SHOES.

At the recent meeting of the Hygienic Congress at Geneva, Colonel Ziegler, who in addition to his strictly military rank is also Chief Surgeon of the Federal Army, read an interesting paper on shoemaking, or rather on the evil effects of badly made shoes, with special reference to hygiene and the marching powers of soldiers. Among other interesting facts Colonel Ziegler mentioned that the Swiss examining surgeons are compelled to reject every year 800 recruits—the strength of a battalion—for malformation of the feet resulting from badly-fitting shoes. The foot is in reality a bow so elastic that at every step it contracts and expands, lengthens and shortens, and a line drawn through the centre of the great toe intersects the heel. But shoemakers, who are generally utterly ignorant of the anatomy of the foot, do not give room enough for the lateral extension of the great toe. They crib, cabin, and confine it until it is forced against the other toes. Hence arise frequent inflammations of the great toe, corns, ulcerations, and sometimes veritable articular inflammation. Another evil, which Colonel Ziegler ascribes in great measure to bad shoeing, is flat-footedness, whereby the arch is converted into a straight line, and

prolonged walking and marching rendered impossible. A test of a perfect pair of shoes is that, when placed together, they should touch only at the toes and the heels ; the soles should follow the sinuosities of the feet, and to give room for their expansion should exceed them in length by fifteen to twenty millimètres. As for military foot gear, the Colonel asked, without answering the question, whether soldiers should wear shoes, "lace-ups," or "bluchers." This is a matter of opinion. Although the principle of the "normal" shoe has been accepted in Switzerland, it is so far without result, for Swiss soldiers shoe themselves at their own expense. The question is, however, being taken up by the Confederation, and a new regulation on the subject is about to be introduced. The only armies in which the normal shoe has been adopted are those of Germany and Italy. In 1876 the Government of Baden organized a shoe exhibition, in which the Italian model carried off the honours. He was of opinion that the ordering of this important article of military clothing should be assigned to the medical staff. As further means towards a reform, the Colonel recommends that, in all establishments controlled by the State, the normal shoe be made compulsory, that military shoemakers be properly instructed, and that in every country there should be a model shoe factory for the making of "physiologic shoes." After Colonel Ziegler had read the paper, Dr. Roth, of London, produced an English-made shoe, which answered to the conditions laid down by the Swiss surgeon, and he contended that, for the prevailing defects in foot gear, the indifference of the medical faculty was quite as much to blame as the ignorance of the shoemaking fraternity. Dr. Jäger, the great German authority on clothing and hygiene, called attention to the material of which shoes are made. The leather in ordinary use, he considers, has quite as many sins to answer for as the shoes into which it is converted. Instead of tanned and blackened leather he would have wool, felt, and, above all, deer skin. Of all these he showed specimens, "which appeared rational." After a discussion on the cause of flat feet, Dr. Vallin, of Paris, admitted that in France shoes, for the most part, are abominably bad, and the feet of their wearers almost invariably deformed. The shoes worn by Parisians are, however, not quite so contrary to nature as those worn by Parisiennes, whose aim seemed to be to make their feet resemble in shape the hoofs of horses. In summing up, Dr. Ziegler expressed his regret that fashion was allowed to have so great an influence on the shoeing of human kind, and that in this, as sometimes in other matters, husbands should live under their wives' slippers.

THOUGHT-READING.

In endeavouring to explain those phenomena which come out, after careful elimination of doubtful cases, we must be careful to avoid equally undue confidence and scepticism. For my own part, I am disposed to agree with Professor Barrett in considering that the assumption of *à priori* impossibility is more to be deprecated in the present state of our knowledge of Nature. There is very little fear that science will accept any wild hypothesis in explanation even of phenomena most unlike those which have hitherto been brought within its sphere; for the corrective capacity of science, already strongly developed, increases daily. On the other hand, there is always some degree of danger that questions of interest may unwisely be put on one side as not worth inquiring into, *because* they do not at first seem explicable by known physical laws. The two dangers are, however, closely related together. It is noteworthy that the mind which most recklessly rejects evidence which seems new or strange, is the readiest eventually to accept the most widely impossible theories. It appears to me that Professor Barrett and his colleagues very fairly present the *à priori* difficulties in this case. Apart from the legitimate grounds of suspicion, open—as they say—to all who have chanced to encounter the alleged phenomena in their vulgarest or most dubious aspects, “it is inevitable that, as the area of the known increases by perpetual additions to its recognised departments, and by perpetual multiplication of their connections, a disinclination should arise to break loose from association, and to admit a quite new department on its own independent evidence. And it cannot be denied that the department of research towards which the foregoing experiments form a slight contribution, presents as little apparent connection with any ascertained facts of mental and of material science. Psychological treatises may be searched in vain for any amount of transmission of mental images otherwise than by purely sensory channels.”

Yet the only explanation science can seek is a physical one. It is open, Professor Barrett considers, to surmise that there is some sort of analogy to the familiar phenomenon of the transmission and reception of vibratory energy.

We are led along this line to conceive that some association may exist between the phenomena of so-called thought-reading, and those strange stories of apparitions at the time of death or of intense suffering, which have been narrated by so many persons of good repute (by so many, indeed, well known to fame), as to make the simple rejection of such

accounts a very unsatisfactory way of dealing with the evidence.

Respecting these experiences, the editor of the *Nineteenth Century* formulated thirteen years ago in the *Spectator* the following attempt at an explanation :—

“ Let it be granted that whensoever any action takes place in the brain, a chemical change of its substance takes place also ; or, in other words, an atomic movement occurs. . . .

“ Let it be also granted that there is, diffused throughout all known space, and permeating the interspaces of all bodies—solid, fluid, or gaseous—a universal, impalpable, elastic ‘ ether,’ or material medium of surpassing and inconceivable tenuity. . . .

“ But if these two assumptions be granted, and the present condition of discovery seems to warrant them, should it not follow that no brain action can take place without creating a wave or undulation in the ether ? for the movement of any solid particle submerged in any such medium must create a wave.

“ If so, we should have as one result of brain action an undulation or wave in the circumambient, all-embracing ether—we should have what I will call Brain-Waves proceeding from every brain when in action.

“ Each acting, thinking brain, then, would become a centre of undulations transmitted from it in all directions through space. . . . Why do not such undulations, when meeting with and falling upon duly sensitive substances, as if upon the sensitised paper of the photographer, produce impressions, dim portraits of thoughts, as undulations of light produce portraits of objects ?

“ The sound-wave passes on through myriads of bodies, and among a million makes but one thing sound or shake to it ; a sympathy of structure makes it sensitive, and it alone. A voice or tone may pass unnoticed by ten thousand ears, but strike and vibrate one into a madness of recollection. In the same way the brain-wave of Damon, passing through space, producing no perceptible effect, meets somewhere with the sensitised and sympathetic brain of Pythias, falls upon it, and fills it with a familiar movement. The brain of Pythias is affected as by a tone, a perfume, a colour with which he has been used to associate his friend ; he knows not how or why, but Damon comes into his thoughts, and the things concerning him by association live again. If the last brain-waves of life be frequently intensest—convulsive in their energy, as the firefly’s dying flash is its brightest, and as oftentimes the “ lightning before death ” would seem to show

—we may, perhaps, seem to see how it is that apparitions at the hour of death are far more numerous and clear than any other ghost stories.

“Such oblique methods of communicating between brain and brain (if such there be) would probably but rarely take effect. The influences would be too minute and subtle to tell upon any brain already preoccupied by action of its own, or on any but brains of extreme, perhaps morbid susceptibility. But if, indeed, there be radiating from living brains any such streams of vibratory movements (as, surely, there must be), these may well have an effect even without speech, and be, perhaps, the *modus operandi* of “the little flash, the mystic hint” of the poet—of that dark and strange sphere of half-experiences which the world has never been without. . . .

“No doubt atomic movements, causing waves in space, must start from other parts of the body as well as from the brain. . . . But the question here is simply limited to how *brains* are affected by the movements of other brains; just as the question of how one pendulum will make other pendulums swing with it is a fair mechanical inquiry by itself, though doubtless other questions would remain as to how the movement of the pendulum would affect all other material bodies, as well as pendulums, in the same room with it.”

Of course, the difficulty in this, as in all other attempts at explaining these occasional and extraordinary experiences, is, that there are no known physical laws which would account for the supposed physical action, and that as yet there seems no possibility of any experimental researches on either of the brain-powers supposed to be involved—the power of originating the suggested brain-waves, or the power of receiving them. Then, again, it is difficult to understand why, if the theory be true, the observed instances are so few, compared with the number of occasions on which (considering the 1,500,000,000 persons existing on the globe) we might suppose the suggested powers would be exerted.

If we follow Dr. Muirhead in likening the action of the brain in such cases as these to its action when the organs of sight, hearing, feeling, &c., communicate to it impressions from without, the questions (which Dr. Muirhead reminds me that I asked of him four or five years since) come before us, “What is the organ by which ethereal waves affect the brain? and how are they conceived to act?” This, he says, is asking too much, at least in the present state of psychological physiology. Yet, until these questions are answered, it cannot be said that there is any sound scientific basis for the brain-wave theory.—*Knowledge*.

HOW UNCLE TOM ESCAPED FROM THE
COMANCHES.

By J. A. S.

"A story, uncle! Tell us a story!" we all cried.

Uncle Tom had seen a good deal of the world. He had been rather adventurous when young; had gone to sea; been up and down in Australia; and had spent some years in Texas. He could tell all sorts of stories about his adventures; and we youngsters were always ready to hear them.

"What shall it be about?" said Uncle Tom.

"Anything you like, uncle!" cried my brother John. "Tell us about the Indians!" cried Harry. "Oh, yes, tell us something about the Indians!" we all exclaimed.

"Shall I tell you how I escaped from the Comanches?" asked Uncle Tom.

"Oh, yes; that will be capital!" we cried. So we arranged ourselves round his knees, and he began his story.

"I suppose," he said, "I must first tell you how I became a prisoner. It was in this way. When I lived in Texas, a number of us would, from time to time, make a party for a hunting expedition upon the prairies. Once a party of us, six in number, had set out, intending to spend a few days in this way. Game not being very plentiful, we advanced pretty far into the prairie.

"In the evening of the third day we were resting round a fire we had kindled, awaiting the cooking of a turkey and some slices from a deer we had killed. We had tied our horses to some trees, for we were on the edge of a forest; and I strolled a few yards among the trees. I had climbed up a tree to see if there was anything in sight, when I noticed that the tree was hollow. It was an old oak-tree, with a very thick trunk, and where the stem divided into three large branches there was a wide, deep cavity.

"Just then I heard a shout: 'The Indians! The Indians!' I sprang from the tree, rushed to the camp, and then I saw out in the plain a troop of twenty or thirty Indians. We all rushed to our horses, and were soon carreering across the plain pursued by the Comanches. On we sped, swift as the wind; but suddenly I found myself sprawling upon the ground. My horse had stumbled in a hollow, and had fallen."

"And did they catch you, uncle?" we all exclaimed.

"Yes. Before I could recover myself and remount, the

Comanches were upon me, and I was a prisoner. I was bound hand and foot upon my horse, and led away back into the prairie by the two who had captured me. The rest, both of my comrades and of their pursuers, were soon out of sight.

"My captors conducted me in the direction of our camp; and, when we arrived there, they appeared to determine to stay there and await their companions. I was taken from my horse and thrown upon the ground roughly enough; and then they relit the fire and began to prepare their supper. It was presently dark, and they had each made their preparations for the night—I being still left upon the ground, tightly bound. I lay there some hours, sleepless of course, and revolving in my mind my probable fate. I saw that the Indians took little notice of me, thinking escape quite impossible, I suppose; and indeed so it seemed to me for some time. But by chance I noticed a stone of some size lying upon the ground a few feet from me. An idea came into my head. Watching my opportunity, I turned myself over, and rolled towards it."

"Did they not see you?" asked John.

"No," continued Uncle Tom; "I managed to reach it without being seen, and then, by a little wriggling, I brought the thong that tied my wrists in contact with the sharp edge of the stone. I now began rubbing it against the stone, keeping my eyes upon the sleeping Indians all the time, and discontinuing the friction when I perceived the slightest motion. After at least an hour's work the tough thong was cut, and I was free."

"Oh! how lucky!" we all exclaimed. "What did you do then, uncle?" asked Harry.

"I had now to free my feet," continued Uncle Tom, "and that was a still more difficult task. However, the night being now rather dark, I succeeded in untying the knot without being discovered."

"That was jolly!" cried John.

"I was not far from the edge of the forest; and it was now my object to get under the shelter of the trees. Could I succeed? I watched intently, retaining the posture I had held while bound. At any moment my captors might have come to me, and had they done so, and perceived that my fetters were unloosed, all hope of escape would have been destroyed. Watching my opportunity I rose, and, bending low, made a quick run for the trees. In two minutes I had reached the hollow tree I had noticed before, and, without any hesitation, I climbed up it and let myself down into the hollow. But, when I reached the bottom, my feet came in

contact with something soft, something that had motion, and slipped from under me, then gave a spring, knocking me aside, and darted through the opening. I heard a crackling among the underwood. I had disturbed some animal in its lair. Presently I heard another sound. It was the Indians. They had heard the noise, had discovered my flight, and, thinking it was I who made it, were pursuing the creature through the forest."

"And did they find you, uncle?" we cried.

"No, they did not imagine apparently that I was so near. The sound of the hunt was soon lost, and I remained in my close prison. But I was full of fear. Would the Indians make a search in the neighbourhood of the camp when they found they had only pursued some wild animal? Yet, thought I, they will hardly be able to overtake it in the darkness in order to make that discovery. As for the animal itself I had no fear. It was no larger than a fox, though what it was I could not tell. It had, however, no doubt received such a fright, that it would not be likely to return to the nest from which it had been so rudely expelled.

"After about an hour I heard the Indians return to the camp, evidently in discomfiture. I heard them pass the very tree in which I was concealed, and could hear their voices. After that I lay still until morning. I did not even then venture to move from my hiding-place. I knew my captors would probably await the return of their companions, if they had not been already joined by them; and I feared even showing my head out of the hollow, lest some quick eye should perceive it. I felt the pangs of hunger very sorely, for I had not eaten since the previous morning—our supper having been disturbed by the Comanches. Still I dared not move. It was only when the sun had been many hours above the horizon that I ventured to climb upward and cautiously peep from my hiding-place. I could see the place of the encampment, and I saw that it was deserted. My captors, thinking I had escaped in the forest, had not cared to make any further search, and had gone away."

"What a wonderful escape!" cried Harry.

"Even then," continued Uncle Tom, "I did not venture out, but determined to wait till evening. Evening came. Cautiously I crept out from my covert, and, eagerly scanning every side, made my way out of the forest. I looked carefully over the wide prairie. Nothing was to be seen. I advanced towards the abandoned camp. Here I found a few fragments of food left upon the ground, with which I appeased my hunger; and I quenched my thirst at the spring of water

that had directed our choice of the spot for our camp the preceding evening.

"Having refreshed myself, I prepared to commence my journey homeward ; but first I carefully looked around, hoping to find some weapon wherewith to defend myself. I found nothing ; and so, providing myself with a stout cudgel from the forest, I began my homeward march, hoping to make some progress during the two or three hours that still remained before dark. It was a difficult journey, and took me three days to complete it, during which time I suffered considerable hardship, especially from hunger ; but, at the end of that time, I astonished my friends by re-appearing among them. They had given me up for lost."

"And had all the others got safely home ?" we asked.

"Yes ; I was the only capture the Indians made, except my horse ; and this they did not keep, for, strange enough, it made its appearance in the settlement the day after my return, having, no doubt, strayed from its captors, and found its way home by instinct.

"Are you satisfied with my story, children ?"

"Oh, yes," we all replied ; "it is a capital story."

AN EARTHQUAKE OR A BOY.

In the early part of a certain summer the select men of a little New England town determined to erect a high pole, on which a new flag was to be raised on the coming Fourth of July. According to the ordinance which they passed, this pole was to be set up on the highest point of land within a mile of the Town Hall, provided the owner of such land should consent.

The town people were very glad to have the pole, and it was expected that the raising of the new flag, with the attendant speeches and other ceremonies, would be a very interesting event, and would attract not only the town-folk but many persons from the surrounding country.

But after the matter had been talked over for a day or two, some of the more thoughtful of the inhabitants of the town began to find an objection to the ordinance.

"The select men did not think what they were about," said Mr. Silas Markle, the schoolmaster, "when they voted to put the pole on the highest point of land within a mile of the Town Hall. I have surveyed pretty much all the ground about here, and I know that Mullein Hill, on old Jimmy

Haskins' farm, is higher than any other land in the neighbourhood. The next highest is the hill on Mr. Upton's place, but that is at least six feet lower than the highest part of Mullein Hill. Now it is my opinion that if that pole is put up on Jimmy Haskins' property he will levy toll on everybody who goes to the celebration. We all know he don't allow people to walk over his fields, but he will jump at a chance like this to make money."

"That's so," said a bystander. "I believe he got the thing passed himself, just to screw pennies out of his friends and neighbours. He knows very well that his hill is higher than any land near the town."

The day after this Mr. Jimmy Haskins was in one of the stores of the place, where there were a good many people collected, when one of his neighbours asked him a plain question. "Mr. Haskins," said he, "if the pole is set up on your land you'll let everybody go free to the hill, won't you?"

Old Jimmy Haskins smiled and did not immediately answer, and then he said: "When the flag-pole is set up on Mullein Hill I want everybody in this town and every one within thirty miles around to attend the celebration, and they'll all be free to come through my big gate and to walk up to the hill, *provided*— And I'll let you all know the provision when the time comes." And then he smiled again.

"You seem to feel pretty sure, Mr. Haskins," said his neighbour, "that your hill is the highest point of land in the neighbourhood."

"Of course I am sure of it," said the old man. "I know, just as well as I know anything, that Mullein Hill is six feet higher than any other ground in these parts, and nothing can change that state of affairs except an earthquake."

"Or a boy," said a youthful voice from the outside of the little group.

This voice was not very loud and few persons heard it. Certainly Jimmy Haskins did not. The youthful voice belonged to George Upton, a lad between thirteen and fourteen years old. George, as well as the other boys in the town, was full of enthusiasm about the flag-pole, and he had had strong hopes that the hill on his father's farm would be found higher than Mullein Hill. But on talking the matter over with Mr. Markle he had been assured that this would not be. He had thought a great deal upon the subject, and while listening to Mr. Haskins' boasting talk in the store, had hit upon a plan by which he would try to change the state of

affairs which the old man had said could be altered only by an earthquake.

"The pole ought to be on our hill anyway," he thought, "for it's near the road, and everybody could come in without walking through a long, dirty lane. Besides, I'm not going to stand by and see old Jimmy Haskins taking two or three cents from every person who goes to the flag-raising."

It must be admitted, however, that Master George's plan was prompted a good deal by personal feeling. He would be very proud to have the great pole set up on his father's land.

Mr. Silas Markle, who was the surveyor of the town as well as the schoolmaster, had been informed by the committee having the matter in charge that on the 20th of June, which fell on a Saturday, they would employ him to ascertain the proper point of land on which to erect the flag-pole. This gave George but one week to carry out his plan, and he, therefore, set to work with great energy. Having first obtained his father's permission, he called together a number of his boy-friends and announced to them what he intended to do. If Mullen Hill was six feet higher than the hill on their place, he would make the latter seven or eight feet higher than it then was, and, if the other fellows would help him, he believed this could be done without the assistance of an earthquake. His plan, as explained, was wildly approved by the boys, and, as this was vacation time, George and his companions began their great work early on Monday morning. Wheelbarrows, crowbars, shovels, and spades were borrowed, and Upton's Hill soon became a scene of great activity. Everything was done under George's directions, and he began operations by wheeling all the large stones that could be picked up in the field to the top of the low, round hill. These were spread over a space of fifteen or twenty feet in diameter, and formed the base of the mound to be built. Earth was wheeled up to fill in the spaces between the stones; sods and smaller stones and earth were piled up, layer upon layer, until, toward the end of the week, the top of the mound was about eight feet from its foundation. There were more than twenty boys engaged in the work, and they laboured every day with great enthusiasm.

George built his mound a good deal smaller at the top than at the bottom, and, as far as possible, he made it conform to the general shape of the hill. The outside of it was covered with sods and earth, and when finished it presented a very creditable and solid appearance.

When the committee, with Mr. Markle, started out on the

following Saturday on their tour of inspection, they were met at Mr. Haskins' gate by that gentleman himself. "You are welcome to measure Mullein Hill," he said, "but, of course, it is a mere matter of form. I am perfectly willing to have the pole set up on my land, but I intend to charge each person coming here a small toll to pay for the wear and tear of the ground. There is nothing in the ordinance to prevent that."

When the height of Mullein Hill had been ascertained, the committee started off toward the Upton farm.

"There is no use going any further," said Mr. Haskins. "We know all about the other hills round here."

"There's a point of land on Mr. Upton's place I wish to measure," said Mr. Markle.

"Stuff and nonsense," said Jimmy Haskins, but he followed the party.

Nearly all the boys in town and a great many other people were assembled at Upton's Hil when the committee arrived there, and when Mr. Jimmy Haskins saw the mound that had been raised, his surprise and rage were very great. He insisted that the height of this mound should not be measured, for it was not a natural formation. But the committee declared that the ordinance called for the highest point of land, without reference to the manner in which it was formed. The measurements were made and the top of the mound was found to be nearly three feet higher than the summit of Mullein Hill.

On the Fourth of July the flag was raised on the pole, which was firmly set in George's mound. The pole was high, the flag was a beautiful one; everybody cheered and was happy, and no one paid a cent for the privilege of being present at the celebration.

"I thought nothing but an earthquake could make any of these hills higher than mine," grumbled Mr. Jimmy Haskins, "but I forgot that there were such things as boys."—*Our Continent*.

WITHOUT strong affection, and humanity of heart, and gratitude to that Being whose code is Mercy, and whose great attribute is Benevolence to all things that breathe, true happiness can never be attained.—DICKENS.

THE prejudice of education, the pride of place, the ignorance which might have overcome, or the glory of this world's dominion, will yield us no apology for error before the throne of God.—BISHOP HOPKINS.

Poetry.

THE WEED.

A weed that grew upon a wall !
 A weed that was despised by all !
 And yet upon such sterile soil
 It grew to beauty, size, and worth,
 So that the people sallied forth,
 With much expense and endless toil,

To see this once-contemned flower,
 Which now they envied for the bower ;
 Because its fragrance and its grace
 Brought gladness to the sense : they said,
 " We always vowed that it would shed
 A glory on this desolate place."

Anon there came, from north and east,
 A biting blast that chilled the beast—
 That stripped the beast, and left it bare,—
 And smote each bush and lowly weed
 That had sprung from a wandering seed,
 And left them to droop and wither there.

It smote the flower upon the wall,
 That was admired and prized by all,
 So that its beauty and strength were gone :
 It never again was bright and fair,
 Yet shed it a fragrance everywhere—
 More sweet it seemed the more alone.

No more the people went to view
 The wilding flower that careless grew,
 A mark to the finger of scorn, as 'fore
 'Twas a mark for the envious eyes of all :
 " We said," they cackled, " that it would fall,
 And see, it droops to rise no more !"

T.

Facts and Gossip.

A WONDERFUL MEMORY.—The learned Bishop Jewel, who died in 1571, was blessed with a most wonderful memory. He could exactly repeat what he had written at any former period after once reading it. During the ringing of the bell for public worship he could commit to memory a whole sermon, and pronounce it without hesitation. His usual custom was to write the heads of his sermon on his memory, and so firmly were they, after a few minutes, imprinted on his mind, that he used to say that if 10,000 people were

fighting and quarrelling all the time he was preaching, they could not confuse him. To put him to a full trial, Dr. Parkhurst uttered to him some of the most difficult and barbarous words he could find in a calendar; and Bishop Hooper, of Gloucester, gave him forty Welsh, Irish, and foreign words, and after once or twice reading, and a little recollection, he repeated them all backward and forward. In the year 1563, Sir Nicholas Bacon, lord keeper of the great seal, having read to him from Erasmus's Paraphrase the last clause of ten lines, confused and imperfect, with a view of more fully trying his gift, sitting silent awhile, and covering his head with his hand, he rehearsed all the broken parts the right way and the reverse without hesitation. He professed to teach this art to others, and so instructed his tutor, Dr. Parkhurst, at Zurich, that within twenty-eight days, by giving only one hour each day to the subject, he learned all the twenty-eight chapters of the gospel of Matthew so perfectly that he could repeat any verse, telling what went before and what followed.

MAN AND INSECTS.—The only nerves (worth mentioning) in the human body which are not under the control of the brain, are those of the heart and other internal organs; and over these parts, as everybody knows, we have not any voluntary power. But all our limbs and muscles are moved in accordance with impulses sent down from the brain—so that, for example, when I have made up my mind to send a telegram to a friend, my legs take me duly to the telegraph office, my hand writes the proper message, and my tongue undertakes the necessary arrangements with the clerk. But in the insect's body there is no such regular subordination of all the parts composing the nervous system to a single central organ or head office. The largest knot of nerve matter, it is true, is generally to be found in the neighbourhood of the sense organs, and it receives direct nerve bundles from the eyes, antennæ, mouth, and other chief adjacent parts; but the wings and legs are moved by separate knots of nerve cells, connected by a sort of spinal cord with the head, but capable of acting quite independently on their own account. Thus, if we cut off a wasp's head and stick it on a needle in front of some sugar and water, the mouth will greedily begin to eat the sweet syrup, apparently unconscious of the fact that it has lost its stomach, and that the food is quietly dropping out of the gullet at the other end as fast as it is swallowed. So, too, if we decapitate that queer Mediterranean insect, the praying mantis, the headless body will still stand catching flies with its outstretched arms, and fumbling about for its mouth when it has caught one, evidently much surprised to find that its head is unaccountably missing. In fact, whatever may be the case with man, the insect, at least, is really a conscious automaton. It sees or smells food, and it is at once impelled by its nervous constitution to eat it. It receives a sense-impression from the bright hue of a flower, and it is irresistibly attracted towards it, as the moth is to the candle. It has no power of deliberation—no ability, even, to move its own limbs in

unaccustomed manners. Its whole life is governed for it by its fixed nervous constitution and by the stimulations it receives from outside. And so, though the world probably appears much the same to the beetle as to us, the nature of its life is very different. It acts like a piece of clockwork mechanism, wound up to perform a certain number of fixed movements, and incapable of ever going beyond the narrow circle for which it is designed.—*Knowledge*.

IS THE HUMAN SKULL BECOMING THINNER?—Mr. W. B. Cooper endeavours to show that it is. If, he says, we accept the tenets of evolutionists, a race adapted to certain circumstances will, if these circumstances be altered, become modified in a corresponding degree, and retrogression may result as well as improvement, and this modification may be confined to a certain part or organ. What forces, then, have exerted their influence on the casket of the brain? First, natural selection, in the case of those creatures that engaged in fierce combats, would tend to eliminate those individuals with frail craniums; and, as man comes within the category of belligerent creatures, when barbaric warfare and the dangers of the chase were common occurrences, natural selection would, of course, exercise a powerful influence in maintaining a standard of cranial strength. Then, too, in the presence of repeated violence, adaptation would undoubtedly provide a suitable armour for this delicate and important organ. In civilized man, however—at all events, in the higher grades of modern civilization—natural selection may be said to exert no influence in that direction; war is too infrequent and engages too small a portion of mankind, while the forces with which it deals are of a nature to alter the whole aspects of the case. And while adaptation undoubtedly operates upon other portions of the frame to maintain their rigidity, it is rarely that the skull is called upon to support any greater pressure than that exerted by the head-gear. It is not to be overlooked that among semi-civilized people the head is often made to support considerable weights, and, except where rigid rules prevent intermarriage of classes, the joint action of adaptation and heredity disseminate the effects of this custom throughout the community. A blow that would shatter a European skull falls harmless on that of a negro. There probably never was a time in the history of the world when the skull was subjected to so little violence as since the introduction of modern methods of transportation; and, when we recall the fact that it was but a few centuries ago that the more advanced nations of the present day were barbaric, it is too soon to look for any great change. Yet it is not uncommon to hear of cases of the fracture of the skull which are ascribed to its unusual thinness. May not these be the results of the co-operation of the agencies referred to? If the force of the position assumed by Mr. Cooper is accepted, the logical conclusion is that we are approaching a time when the human cranium will become much thinner—so delicate, in fact, that it will be easily fractured: we may then, he thinks, expect a revival of natural selection, and an increase of cases of death from violence to the head.

Correspondence.

MR. EDWARD HINE.

A correspondent sends us two photographic portraits of Mr. Edward Hine, author of "Forty-seven Identifications of the British Nation with the Lost Tribes," and asks us to oblige "numerous adherants of the Anglo-Israelite theory by giving a phrenological sketch of their esteemed leader." It should be said in the outset that the portraits are not such as to enable us to judge of the whole of his phrenology; but where the head fails us the face can be applied to. The intellect is a very marked one; and a man with such a development of brain is sure to distinguish himself in one way or another, provided, of course, it is sustained by an active temperament. This Mr. Hine certainly has. The mental temperament is highly developed, and is well sustained by the vital powers. He is a man who enjoys life, but he enjoys it only so far as it is permeated with intellectual pleasures. Few persons are so well capacitated to enjoy life as he is; he enjoys it to the very hilt. He may like to dwell upon the joys of the life to come; but he does not sigh for it, and will not until he has exhausted the manifold pleasures of this life. Not that he is, as the phrase goes, of the earth earthy, but that he is fully organized to enjoy from day to day. His pleasures, however, are not of the low, grovelling type; they are chiefly intellectual and moral, though other pleasures, in moderation, he is not disinclined to. He must be of a family noted for its power to make the most of both worlds, and certainly to make the best of this while belonging to it; and, barring accidents, he will, in all likelihood, retain his hold of the world to a good old age.

One of the chief characteristics of Mr. Hine (after the one above noted) is the strength of his social nature. Few men have such strength of affection all round. He makes strong friendships, is fond of society, loves home passionately, and is strongly attached to children. He was a mother's boy, clung to her very fondly, and has clung to some mother's daughter ever since. He is never quite at home in the society of men alone.

His purely selfish propensities do not appear to be particularly strongly developed. What he makes he will spend, either to gratify his intellect or his affections and benevolence. He has, however, strong desires, and he wants to gratify them.

Morally (as far as the photograph will allow us to judge), the predominant powers appear to be Hope, Marvellousness, Benevolence, and possibly Reverence. Hope and Marvellousness appear to be particularly large and influential.

Of the intellect, we should style it—in two words, imaginative and philosophical. The large organs are Causality, Ideality, Mirthfulness, Language, and Constructiveness. Comparison appears to be somewhat smaller in relative development. The perceptive faculties

are not small, but they do not equal the largest, and with his imaginative and mirthful nature they would be less influential. Language is an extraordinary gift: there is no end to his powers of conversation. Agreeableness is also a marked quality of mind. That and Imitation enable him to adapt himself to others very easily. When in company he is the life of it; there is not much dullness where he is; fun, frolic, wit, fancy, satire, of a *not* unamiable kind—all in turns help to keep the company alive.

As far as his intellectual capacities go, Mr. Hine is qualified for a writer, especially for a writer of fiction. He would probably have excelled as a writer of comedies. The fun is so exuberant in him that it is a wonder it did not come out as a youth in clownishness, or buffoonery of some kind. Perhaps it did. He has some philosophical capabilities; but, on the whole, philosophy is too serious for him. Theology affords more scope for his varied powers. But the platform is his place.

One could say a great deal more of such an organization; but that will do—will it not, Mr. Hine?

AFTER a holiday in the States of three months—during which time he has lectured successfully in several towns—Mr. Fowler will return to England about the time this paragraph meets the eye of the reader.

Answers to Correspondents.

CLARKE (Cleator Moor).—We should not advise you to dilute phrenology with mesmerism. If you wish to study the latter, do so; but we should say, by all means perfect yourself in phrenology first. Much detriment has been done to the science by self-styled “professors” mixing up much ignorance of phrenology with a great deal of trickery which they called mesmerism.

G. T. (Eccles).—To answer so important a question from the numbers you send would be unsatisfactory. Your better way would be to call when in town.

A LOVER OF COMBE.—Thanks for your verses. They are, however, hardly up to our standard.

NEW BOOKS RECEIVED FROM AMERICA.—“The History of Woman Suffrage,” Vol. II. “For Girls: a Special Physiology,” by Mrs. E. R. Shepherd. “Marriage and Parentage,” by Dr. Holbrook.

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HENRY IRVING.*



R. IRVING has an unevenly developed head, with many strong and some weak points of character. He should be known for his thirst for information, a desire to see and experience for himself, for his ability to acquire knowledge, and for his talent to use the knowledge he has. His best gifts are in a scientific or literary direction, for he has a wonderful faculty of acquiring information in various directions. As he grows older he will show more of the muscular temperament.

He has a passion for travelling, and he remembers places afterwards as if they were before his eyes all the time. He can describe what he has seen, and the localities and positions of objects most accurately. He can remember the wording of a page and the locality of things seen. He has all the lower range of the perceptive faculties large, which lead him to study material objects in all their relations; hence he could excel as a geologist, mineralogist, chemist, navigator, surveyor, or in any department of science. He knows how to act on the human mind, and when and where to act.

He is remarkable for his business punctuality. He can judge of the passing of time almost to the second. This would be particularly true in regard to music. Any little deviation in the smallest degree would annoy him. He has favourable power for analysis; his causality is developing almost daily, and he is particularly anxious to know the causes of everything, and is in the habit of asking people "why" for almost every statement they make. He is a quiz and tease; he knows just how to do it. He sees the ridiculous side of a thing, and enjoys humour. He has no natural dis-

* It is perhaps necessary to state, in order that its full significance may be understood, that this delineation was written in 1874.

position to take on the ways and manners of others, unless to ridicule or make fun. He acts just like himself, and not like anybody else. If he wished to represent any particular character, he would do it from his own ideas and interpretation of it, without taking any one as a guide. He has stronger individuality of character than ninety-nine out of a hundred. He has a perfect detestation of all kinds of catering, flattery, or saying things for mere effect. Mr. Irving acted like a man when a boy, so much so as to get the title of "old boy." He was staid, settled, and matured, and talked more like a sage than a school-boy. He has power to perceive the state of mind of others and to know how to take advantage of that state of mind, so that in speaking he is able to say the right thing at the right time and in the right way. As a public speaker he would know how to take his audience, how to humour them, and how to make the most out of what he had to say. He cannot explain how his intuitions come, but he is as certain he is right as if he could prove them mathematically ; things come to him as it were. He has an unusual amount of reverence, respect, and regard for persons of talent and goodness. He also worships and values sacred things. He has an unusual amount of sympathy. He delights to know that others are happy, even in the animal kingdom ; and to know that even a dog is faithfully attached to him makes him feel comfortable.

He is always in earnest, but not always very enthusiastic. He possesses a great feeling of independence, sense of freedom and liberty ; that was born with him ; but if he is proud it is more the result of culture than of natural organization. He is firm if there is any special occasion to be so ; but usually he is pliable, and sometimes finds it difficult to take a strong position unless the occasion be urgent. He would make a desperate soldier with a cause worth fighting for, and would use wholesale weapons of war to get through with the fight as soon as possible. He is not cruel, but whatever he does he wants to do and have done with as soon as possible. He does things thoroughly if at all.

He is a great lover : what he does love he loves with all his soul, and makes a speciality if not an idol of it. The objects of his love are more outside than inside of the family circle ; great and good men and women are the objects of his love first, and nature next. As a boy he looked upon woman as an angel. He is not particularly penitent ; he would preach the gospel rather than the law. He is not given to finding fault ; his name ought

not to be Cato. He is a little too liberal, generous, and free ; would let people go to heaven too easily.

He has a good physiology for long life. He must have come from a remarkable parentage. One of his parents was strong and healthy and long-lived, but not both. He has the ability, if he can get into the right groove, of making a very decided mark in the world, first in literature, second as a naturalist, and third in some form of art or in some public



sphere where he can act independently of others, and develop his own individuality. To succeed as a speaker he would require considerable experience ; he would be odd and original. If he is spell-bound by any particular impression or thought he is very taciturn, and it is difficult to draw him out and get him to entertain company, for all his thoughts and feelings are intense. He has no faculty for entertaining people by flatteries, small talk, or pliable manners just to please, but he is perfectly straightforward, and

says and does just what he thinks and feels. Not many men are more critical, analogical, intuitive, direct, definite, positive, ingenious and poetical than he is. L. N. F.

Henry Irving was born at Keinton, near Glastonbury, in 1838, and was an only son. At eleven years of age he was sent to a well-known City school in George Yard, Lombard Street, which was presided over by a "Doctor Pinch." There it was that the talent destined to place him at the fore part of the theatrical profession first showed itself. At Christmas time, as is usual in schools, there were plays and recitals executed by the pupils; the Sussex Hall, in Leadenhall Street, was generally hired for these occasions, and the boys were busy studying their parts for more than two months before the period arrived. Young Irving was conspicuous at these performances, and created his first great success in Miss Mitford's *Rienzi*. But his dawning talent was not much encouraged. At fourteen he went into the counting house of an East India merchant, and found time to join an elocution class. Here he studied assiduously, and did short readings as practice. His mind was bent upon the stage, for he felt that his natural gifts lay in that direction, and a very young man—in fact a boy, as he then was—is always anxious to follow the indications of his native talent. He went, at length, to an actor named Hoskins and contrived to take lessons from him in the art he loved. By means of Mr. Hoskins, Irving was introduced to Phelps, who was very kind to him, and offered him an engagement at the opening of Sadler's Wells, in the following season. Irving, however, declined this, and preferred to make his first struggles in the provinces. He appeared on the stage—having, of course, relinquished all idea of a commercial career—at the opening of the Lyceum Theatre, Sunderland, for the first time, in 1856, taking the part of Orleans in *Richelieu*. He was at that time very nervous, and when under the influence of this most painful disease he stuttered, which peculiarity is certainly not a qualification for the stage. He was told by many reasoning friends that he would not, could not succeed; still his determination led him on. He was entrusted with the small part of Cleomenes in *A Winter's Tale*, and had to learn his lines at a very short notice. Sunday intervened, and as was his rule, he would do no work on the seventh day, and, therefore, rose early on the Monday to make up for lost time. He got through the first four acts well enough, but when in the fifth act he had to speak alone, his presence of mind and memory entirely left him. He could not remember a word of his part; he merely muttered, "Come on to the Market Place, and I'll tell you further," and rushed off the stage in despair. The manager of the theatre, however, was kind, and instead of dismissing him, as Irving expected, encouraged him to persevere, and told him that his *fiasco* was a fortunate circumstance, and would teach him to learn his parts better, and treat the profession more seriously. A few days later *A Winter's Tale* was to be played

again, and Irving determined to do well. As a rule, he learnt his parts while walking in the fields, and he paced up and down on the soft grass with indomitable energy while committing the few lines uttered by Cleomenes to memory. He had resolved to get the better of his foolish nervousness, but was not destined to make the attempt in that part at least, for on reaching the theatre on the day set aside for *A Winter's Tale*, he found a notice posted up that Miss Glyn—with whom he had been acting—was ill, and could not appear.

From Sunderland he went, in 1857, to the Theatre Royal, Edinburgh, where he stayed two years and a half, making great progress, playing Macduff and Cassio, and other Shakespearean parts, as well as the "juvenile" characters, with Mrs. Stirling, Robson, Miss Cushman, Madame Celeste, Charles Mathews, Helen Faucit, the inimitable Wright, &c. As his farewell rôle on leaving the theatre, Irving acted Claude Melnotte in the *Lady of Lyons*, and many of his audience then expressed an opinion which has since been justified. In 1859 his friend Toole got him an engagement at the Princess's Theatre, London, under the management of poor "Gus Harris." Irving came to London full of hope and ambition, and signed an engagement for three years; he soon found, however, that the small parts assigned to him would never bring him before the public, and he succeeded in obtaining a cancelment of his engagement, after which he went to Glasgow for six months with Glover. But before leaving London he gave two readings in Crosby Hall, wishing to show that he could do something more than the small parts to which he had hitherto been confined. These readings were attended by Edmund Yates, Tomlins, and L. Blanchard, as well as by many members of the old Arundel Club, and these gentlemen gave most favourable reports of the rising actor; the readings were a great success, and gave him incalculable courage in his up-hill struggle. His Glasgow manager, Glover, taught him much that was valuable about the old comedies, and when Glover died, Irving went to the Theatre Royal, Manchester, where he remained until 1865. This was the turning point in his career, for he was able to play "runs" of pieces, and perfect his conceptions of characters. It is rare in the provinces to get a good "run" for a piece: the audience like a nightly change of performance. However, Irving was so successful that the usual rule was abandoned, much to his satisfaction. From Manchester, where he played Hamlet with great success for a week before his departure, Irving went to Liverpool and acted under Henderson's management; his power ever widening and his popularity increasing, Fechter had, during this time, continually offered him a London engagement, but he had always refused, wishing to try a principal part on the metropolitan stage. At length Irving became one of Boucicault's provincial company, under the express condition that if he were successful, he should act in London. He appeared under Boucicault's wing in *Two Lives of Mary Lee*, subsequently played at the St. James's, London, under the title of

Hunted Down. Tom Taylor was present at Irving's trial—as it were—and after the piece, he and Boucicault simultaneously made him an offer for London. Irving accepted Boucicault's proffered engagement, and appeared in the St. James's Theatre in 1866, in *The Belle's Stratagem*. Here he was so successful that he was compelled to come forward and acknowledge the applause of the audience in the middle of the scene, as well as at the fall of the curtain. *Hunted Down*, in which he acted with Miss Herbert, confirmed his great success.

He has acted in London ever since, and our readers do not require to be told how popular a figure he soon became in the Theatrical world. He played prominent parts in Byron's *Dearer than Life*, *Lancashire Lass*, *Uncle Dick's Darling*, &c.; he also drew much attention to himself in Albery's *Two Roses*, in which he played Digby Grand, acting the part for two hundred nights in the provinces.

It was not, however, until he played Mathias in Leopold Lewis's rendering of MM. Erckmann-Chatrian's *Juif Polonais*, now known everywhere as *The Bells*, that he achieved a startling and undeniable success. Irving had been in H. L. Bateman's company at the Lyceum Theatre some time, acting Jingle in *Pickwick*, when *the Bells* was produced. Everyone laughed at the idea before the piece appeared; Lewis was joked most unmercifully by his friends when he spoke of adapting it to the stage, and it was universally settled that the judgment scene in Mathias' dream could never be represented. How finely it was rendered all those who have seen the piece will remember. As we have before said, after the first night of this weird and horrible drama, Mr. Irving awoke and found himself famous. From that moment his career has been one long success. In *Eugene Aram*—suggested by Irving's effective recital of Hood's poem—in *Charles the First*, which character he was told he could not depict for the pathos was beyond him!—in *Richelieu*, he achieved brilliant success. It was at Lord Lytton's suggestion that Irving determined to study the part of the crafty old Cardinal. Of Mr. Irving's masterly rendering of Richelieu it is, perhaps, superfluous to speak now. We cannot help wondering, however, what the awkward boy, who stuttered the words of Dr. Orleans' part at a Sunderland Theatre, would have said, could he have seen the man who, seventeen years later, was to be greeted with the long and mighty shouts of welcome and applause, that are the tribute of the people to the genius of the few!

Mr. Irving's subsequent impersonations in the poetic drama have been Hamlet, Macbeth, Othello, Philip, in Mr. Tennyson's *Queen Mary*, Richard in *Richard III.*, the dual parts of Joseph Lesurgues and Dubosc in the drama of *The Lyons Mail*, Louis XI, in the play of that name, Claude Melnotte in the *Lady of Lyons*, and, more recently, Romeo, in Shakespeare's dramatic tale of the unfortunate Italian lovers, not to mention several others, including the title part in *Vanderdecken*; in all of which, if he has not reached the very highest mark of dramatic inspiration, he has shown a grasp of intel-

lect, and a power to interpret the meaning of the dramatist second to none that has of late appeared upon the stage ; and upon which, moreover, he has impressed an individuality of his own which will have to be taken into account by succeeding impersonators. He exhibits the same power of assimilating the spirit of a play, and the same general versatility in the character of Benedick in *Much Ado About Nothing*, at present occupying the boards of the Lyceum Theatre. Space will not at present permit of our analyzing Mr. Irving's varied and substantial gifts, but we may be able to return to the subject at some future time. It should be said that Mr. Irving's Shakespearean revivals have been chiefly identified with the Lyceum Theatre, the lesseeship of which he has held for the last four seasons.

GEORGE COMBE.

BUSINESS AND FIRST STUDIES IN PHRENOLOGY.

Young Combe was sixteen years of age when he entered the office of Higgins and Dallas, and he remained in it till he was twenty-two. During those six years (1804-1810), he not only worked hard at his profession with an earnest desire to perfect himself in its details, but devoted his leisure hours to the improvement of his education, especially in French and in general literature. He was ambitious to excel, and took every available means to prepare himself for advancement. His biographer tells us that "as a child he had dreamed of doing something which would distinguish him in the eyes of his fellowmen ; as a youth all his energies were given to the effort to place himself in a position to attain that distinction." He was very earnest in all he did, and was particular in small things as well as in great. Conscientiousness, indeed, appears to have been the leading trait of his moral character, and he placed duty and right above all things. This led him at times to be severe in his judgments, and very hard on wrong-doers : a characteristic, which was softened in after years, when his native benevolence came more into operation.

If, however, he was strict in requiring others to "toe the mark," he was no less exacting with himself. He was no foe to social amusement, but rather encouraged it as being necessary to health, and to the formation of a well-balanced character ; still, in his own case, he kept relaxation of the kind within due bounds. The self-command and equability of disposition which characterised him through life were mainly due to the control he exercised over his passions and impulses at this time.

In 1806 Combe attended the lectures on conveyancing delivered under the authority of the Society of Writers to the Signet, and in 1808-10 went through the usual course of study of Scotch Law, at the Edinburgh University. In the latter year his apprenticeship came to an end, and he at once sought a situation in which he would have the prospect of a partnership, or have opportunities to form a connexion of his own. Such a position he found in the office of Mr. Peter Coupar, Writer to the Signet. He received a small salary as general assistant, and a commission on the cases he conducted through the Courts, and was at the same time allowed to accept whatever business might be offered to him privately. The connection lasted about three years, with mutual advantage; during that time, however, Combe's private business extended so much that, when, in January, 1812, he had passed his examination and had been admitted Writer to the Signet, he was in a position to take a house (in Bank Street) and begin business for himself; although for a short time he still continued his business relations with Mr. Coupar. Mr. Coupar was at that time reported to be in good circumstances, but in later years he fell into difficulties, when Combe was able to show his gratitude for benefits previously received at his hands.

But, although the young and rising solicitor threw great energy into his business, he did not allow it altogether to absorb his attention. He took a deep interest in political and social questions, and was much attracted by the broad unconventional views of the *Edinburgh Review*, then in its youth, and imparting a stirring literary and political impulse to the rising generation. He was also influenced by the writings of William Cobbet, whose courage in exposing abuses he greatly admired. In 1811 he began to keep a diary (that best of all possible ways of cultivating self-consciousness), and among his first entries is the following: "A desire of fame may be one mark of a mind that deserves it." From this diary we learn that he had already conceived the idea of some day writing a "useful book on human nature, and especially on the education and intellectual state of the middle ranks of society."

The unsatisfactory state of his health towards the end of 1811 frequently interrupted his studies. Too close application produced confusion and dulness of mind, and made him unable to fix his attention long at a time. He was taxing his powers too much, rising at seven o'clock in the morning and continuing at work until nine at night; so, "with that wise observance of the laws of the constitution, which afterwards

produced the 'Constitution of Man,' " says his biographer, "he reduced the number of his studies, and did not rise till after eight in the morning."

At this time Combe was a regular attendant at the West Church, and his Sunday afternoons were devoted to the writing of an abstract of the sermons preached by the divines under whom he sat. "Many good people long regarded George Combe as a rank Atheist" (I again quote from Mr. Gibbon, his biographer), "a companion fit only for Tom Paine,—and his teaching as most perilous to morality. The contrary is the truth. He was earnest in religion, as in everything else; but he dared to question forms, and he consequently shocked those who regarded forms of worship as the most essential part of religion."

At this time, and whilst busy with his legal studies, he found leisure enough to write a number of essays on various subjects; he also took part in the debates of a society of young men called the "Forum." He was methodical in his habits, and ever strove to shape his course by the light of reason. For instance, he found himself falling into the habit of doing everything in a hurry—walking fast, talking fast, and reading fast, and being impatient with others in the common details of everyday life. He, therefore, determined to check this tendency, and accordingly compelled himself to do everything with deliberate slowness. His tastes were very simple, and at this time he lived chiefly on vegetable food, with decided benefit to his health. "I take porridge to breakfast," he says; "broth and bread and an egg, or rice and milk, to dinner; tea; and buttermilk and bread to supper."

In the course of a year or two his health began to improve, and his business increasing, he was comfortable and happy. His sister Jean acted as his housekeeper, and his brother Andrew, who was studying surgery, lodged with him; his social surroundings, therefore, were pleasant, and he took delight in his profession and in his studies. In addition to reading history, to attending lectures on geography as applied to history, and to taking lessons in chemistry, he also became a student of anatomy and physiology, under Dr. John Barclay, then the most esteemed teacher of these sciences in Edinburgh; the latter studies proved of especial value to him when, a few years later, he was drawn to the subject of phrenology. He had been impelled to the study of the structure and functions of the body, in the hope of learning something about the mind, which had always been a subject of deep interest to him; so much so, indeed, that whilst still a youth he had read the works of Locke, Hutcheson, Adam Smith, Hume,

Reid, and Stewart, but with so poor a result that he finally renounced the study of metaphysics for several years, as one which was beyond his powers of comprehension. A circumstance, however, was soon to occur which was to direct Combe's attention to a new method of studying the mind—one moreover which was destined, as he believed, in time to revolutionize our whole system of thought.

Phrenology was exercising the minds of the learned—especially of the metaphysically and medically learned—in Edinburgh; and the *Review* had published (1815) a smart article on the subject, by Dr. John Gordon, a private lecturer on anatomy and physiology in Edinburgh, who had a few years previously published a work on “The Structure of the Brain, comprising an estimate of the claims of Drs. Gall and Spurzheim.” The article attracted much attention, and was laughed at and enjoyed as though it had really been what its author thought it, the death-blow of a system based on quackery. Combe, like the ignorant throng, sided with the *Review*, and among his associates ridiculed the pretensions of Gall and Spurzheim; and when the latter, who was then in Dublin, hastened to Edinburgh to answer publicly the attack on phrenology, Combe refused to go to hear him; and the first course of lectures in Edinburgh was finished without his having so much as seen the man who was to exercise so great an influence on his future life.

His second course, however, Combe attended, and henceforth became a thorough disciple. He tells the story of his conversion in the introduction to his lectures in America: “It chanced in leaving the Court of Session one day, a friend of mine, a barrister, said, ‘Would you like to see Dr. Spurzheim dissect the brain?’ My reply was, ‘Yes, very much.’ ‘Then come to my house to-day at one o’clock.’ I went and saw Dr. Spurzheim for the first time. He laid the *Edinburgh Review* on the table, then he proceeded to display the structure of the brain in a manner inexpressibly superior to that of my late teacher, Dr. Barclay, and I saw with my own eyes that the reviewer had shown profound ignorance, and descended to gross misrepresentation in regard to the appearances presented by this organ when dissected by a skilful anatomist. My faith in the reviewer was shaken, and I attended Dr. Spurzheim's second course of lectures. At the close of the series I had attained the conviction that the faculties of the mind which he had expounded bore a much greater resemblance to those which I had observed operating in active life, than do those of which I had read in the works of metaphysicians; but I was not convinced that these

faculties manifested themselves by particular parts of the brain. Dr. Spurzheim himself had told us that this conviction could be reached only by extensive personal observation. All my former interest in the study of mind was now re-awakened." He procured a number of busts from London, and commenced by careful observation to test the truth of phrenology; and, "at the end of three years," he tells us, "I became convinced that phrenology was true."

Meanwhile, in spite of his phrenological studies, and the increasing demands made upon his time in consequence of his known espousal of the principles of phrenology, Combe did not neglect his business. In 1815 he obtained his commission as Notary Public, which enabled him considerably to extend his practice. In 1816 his eldest brother, John, having died (his father had died the previous year), George, in conjunction with his brother Abram, undertook the management of the brewery for the benefit of the family. Two years later the entire conduct of the business devolved upon him, and for several years he carried it on, notwithstanding his many other occupations. This he was enabled successfully to accomplish by his administrative ability, joined to punctuality and his simple and methodical habits.

In 1817 Combe published his first article on phrenology. It appeared in the *Scots' Magazine*, and was entitled "An Explanation of the Physiognomical System of Drs. Gall and Spurzheim." He was naturally anxious about the accuracy of this essay, and sent proofs of it to Dr. Spurzheim, who was then staying in London, and with whom he was in frequent communication; but the magazine appeared before they were returned. The opponents of phrenology found some slight discrepancies between the "Explanation" and Spurzheim's theories, and of course made the most of them. The article made a stir and caused its author to be more and more identified with the advocacy of phrenology, and to be subjected to much derision in consequence; but this, instead of turning him from the subject, only made him more earnest in his defence of the science he had espoused, and whose principles he was testing with his characteristic caution. During the summer and early autumn of this year, Combe, with two companions, enjoyed a tour on the continent. Proceeding by way of Paris (where Combe renewed his acquaintance with Spurzheim), Verdun, and Metz to Mayence and Frankfort, they thence descended the Rhine to Cologne, and from there journeyed by diligence to Brussels; then Antwerp, Breda, Utrecht, and Amsterdam were visited, and at the last named place Combe embarked for England. His health was much

benefited by the tour, and his mind refreshed by the change of thought and scene. The observations of character that he had made during his travels, together with his conversations with Spurzheim, had deepened his interest in phrenology; and "his conviction of the general truth of the science," says Mr. Gibbon, "was now firmly established."

Soon after his return to Edinburgh he made the acquaintance of Sir George Stewart Mackenzie, who entered into the investigation of phrenology with him, and the friendship thus commenced lasted through life. In 1818 Combe contributed a series of essays on phrenology to the *Literary and Statistical Magazine*; and the attention they received encouraged him in his endeavours to increase his own knowledge, and thus to promote the interests of the science by enabling the public to understand its true nature, and the philosophy of mind based upon it. He never obtruded the subject on any one; nor would he have anything to do with those who approached it in a carping, negative spirit; but to those who desired earnestly to inquire, he was ever ready to explain his views and assist with his observations. To all who came to him for instruction, he had one piece of advice: "Observe nature for yourselves, and prove by your own repeated observations the truth or falsehood of phrenology."

THE STUDY OF PHRENOLOGY MADE EASY.

CHAPTER II.

Nothing is perfected at first. There are stepping-stones to the highest truths, for one truth depends on another, as advanced and upward steps are necessary to reach the summit. No human mind is strong, vigorous, or large enough to comprehend the whole of a scientific, moral, or spiritual truth at its first effort. Every truth has an infinite bearing, while the mind cannot see far into the future, except where figures may aid it.

To commit to memory what is written or learned by manipulation is comparatively easy, but to understand a principle is more difficult; yet it is generally found that when a truth or principle in science is fairly understood it is quite simple, and we wonder we did not see into it before. Many studies are made difficult by the barriers we, in our ignorance, place in the way. The study of mind has been considered very difficult, because the student did not know how to go to work to study it. Because the mind cannot be seen, handled,

weighed, measured, and sliced up like the brain there was a mystery thrown around it, and students resorted to theories and speculations concerning it. The time is probably far distant when all the properties of the mind will be properly estimated, and such questions be properly answered as, Does the quality, size, healthiness, and discipline of the brain make all the difference in mental manifestation? Are all minds equally large, strong, and clear naturally? Has the brain power to take on so much mind and no more? or is there surplus mind where there is insufficient brain power? or does the mind create what brain power it needs in quality and quantity? How much is the child dependent on parentage for quantity of mind and quality of brain power? To what extent is the mind affected by first impressions made on it?

All these questions are important and can only be answered by a long accumulation of facts. That parentage does affect offspring is not a matter of doubt; but how much and to what extent is it responsible? First impressions are known to be powerful and lasting, but are they predominant? It would be very difficult for any one in the flesh to understand mind in the abstract or even to analyze thought, love, hate, or an impression, but to study mind as divided into faculties, with their special organs to act through, is less difficult. It would be difficult to weigh and measure or gauge the power of the mind only by its manifestations, unless we understand the power of the constitution, the tenacity of life, and the quality and healthiness of the brain and its working power, which cannot be known in great minuteness. But taking it as a fact that size, quality and health give power, and that every function must have a distinct organ of its own to work through, and that these organs with their definite locality may be known by observation, we have a comparatively easy task before us to find the organ; and as size and quality give power, we have only to observe and compare to get at the foundation work of the study of phrenology.

The location of the faculties then and their functions do not change relatively, nor does a function manifest itself through any nerves called organs, other than the one made for that particular purpose, any more than any of the organs and functions of the body can change places.

To learn phrenology is to become acquainted with the different faculties of the mind, their formation, use, and adaptation, their locality in the brain, and their power as indicated by the size and quality of the organ. Some persons can learn phrenology easier and quicker than others because they have a more favourable organization. The qualifications for a

phrenologist will be dwelt upon in a separate chapter. In establishing phrenology, and relieving it from all impediments and criticisms, special care is necessary in defining a faculty on presenting it as a distinct individual power adapted to a particular want or condition of man. To analyze it and say just what is necessary and no more requires great critical acumen, and to give just the name to the function that indicates its meaning is a matter of great importance. When the size, quality and vigour of the brain is understood as well as it can be, the faculty defined and location given, and the comparative size understood, the foundation has been laid.

It should be borne in mind that a faculty is as fundamental and individual as any physiological function, and that it can be as distinctly defined and its existence explained as necessary as a function of the body. There can be no radical change in the function of a faculty, although one faculty may, under varied circumstances, be modified and differently directed. It will yet take a long time to so perfect the science and simplify it as to avoid criticism. In the meantime the critics will be busy in exposing its errors, and congratulating themselves on the idea that they have killed it outright. Generally speaking, the critics expose their ignorance of the subject to a laughable degree, and usually those who condemn it the most severely know the least about it.

The study of phrenology is rendered much more easy by pursuing a systematic course, beginning at the beginning and proceeding methodically, and not being in too great a hurry to go from one thing to another. First, we need to know all we can know about the body as to its functions and organs, so as to judge correctly as to its healthiness and quality. Different functions and organs of the body have their particular influence on the mind. The vital organization favours those faculties that belong to the selfish, domestic, animal mind. Where the alimentive tendencies and the ganglionic system predominate there will be a strong leaning to physical luxury and a tendency to animal indulgencies, to ease and quiet of mind and a desire to live and enjoy. Persons of this constitution are not radical, reformatory, or foremost in any enterprise, except in such as facilitate physical enjoyment. They live in present sensation and pleasures, without much regard for remote contingencies, and are not much given to thought, invention, or self-sacrifices. They may be religious, but their religion will partake much of a social nature, and in prayer they will ask God to do all the work and give them the best of heaven's blessings. They want cushions to their seats, springs to their carriages, a table well spread and filled,

and servants to wait on them. Where the heart and lungs predominate, there is plenty of excitability and impulsiveness of feeling ; and those having these organs large will be ardent, earnest, warm, emotional and enthusiastic, subject to varied extremes, fond of contact with others, and of social enjoyment.

Where there is a predominance of the Motive temperament, that is of bone and muscle power, the person will be fond of out-door exercise and will require plenty of it. Such a person belongs to the Boanerges class ; he will generally be found at the head where there is hard work ; his language will be forcible and his character positive ; he will be slow to start, but will bring up at the end. Where the nervous system and brain power predominates there is a more perfect development of the superior brain, and there will be a strong tendency to think, reason, read, acquire knowledge, and do business that requires mind rather than body. With such a temperament the mind has the ascendancy and is more clear, spiritual, and inventive. It will be given to study, to searching writings, making compilations, and to taking an interest in art.

Each organ of the body has its modifying influence. Where several of a similar nature act together the mind is still more affected in a certain direction. It is seldom or never that any one function has the entire influence, although it may greatly predominate where there is a marked imperfection in organization. The more perfect the organization the more perfect will the different functions combine in their influence. It is very important to recognize the influence of the body on the mind, for it is very great. In fact, no practical phrenologist succeeds in analyzing character correctly without taking into account the power and healthiness of the constitution, the quality and amount of blood, the quickness of the circulation, the tone of the digestive system, the largeness and power of the liver, the strength of the lungs and muscles, the restraints of the osseous system, and the important influence of the nerves of motion and sensation, together with the nerves of the brain ; the hair, its coarseness or fineness ; the skin, its thickness or thinness ; the features, whether coarse or fine ; size of the face, whether large or small, as compared with the head ; the neck, whether large or small, long or short, and how the head is placed and poised on the shoulders,—all these things have their influence. When we have properly estimated the conditions and influences of the body, we have just commenced or laid the foundation for learning phrenology.

But to come directly to the head, to ascertain the size and

shape of the brain, we need to take into account the amount of hair and integument, and the thickness of the skull, whether even or uneven, and what part of the brain predominates. Dr. Gall has done a great work for the student of phrenology in discovering the location of the different faculties by long-continued observation and experience ; yet every student should satisfy himself as to the location of the organs by his own observations. Phrenologists do not differ so much as to the location of organs, but some have more faculties laid down in their charts than others, and the same faculty is differently named by some, thinking, probably, that they come nearer to the real function by the name they give. Gall and Spurzheim and Combe laid a very good foundation for the science, but they had not time enough to complete it, hence some changes must be expected by those who make advanced observations ; still they opened up to the world a field of thought and investigation superior to anything ever yet presented to the human race ; for now it is understood that the mind is manifested in distinct faculties, and that these faculties each have a special office to fulfil as well as an adaptation to external nature. What we most need to know is how to manage and cultivate the mind and its component parts, and this phrenology teaches us, for phrenology was the first to recognize and localize distinct faculties, and give importance to self-culture and encouragement to those who are anxious to overcome their imperfections.

L. N. F.

THE PHYSIOGNOMY OF THE MOUTH.

BY J. SIMMS.

The mouth is the external and visible representative of the stomach. If, therefore, this feature is large, we may safely infer that the stomach is correspondingly capacious. Nature never provides facilities for taking into the system what she does not give capacity for taking care of when received. Therefore, whenever the mouth, as the beginning of the alimentary canal, is of considerable size, the passage for food will be found relatively large throughout its entire length. If a wide mouth is supported by full cheeks and thick lips, the stomach will be strong as well as large. If, however, the cheeks are thin and sunken, a weak stomach is indicated, notwithstanding the size of the mouth. No glutton ever yet had a small mouth ; yet, all large-mouthed persons are not gluttons.

The mouth is the mind's portal. The mouth being used, not only for eating and drinking, but for talking, whispering, singing, whistling, kissing, there ought to be indications about this feature and its surroundings to reveal the capacities and tenderness of its owner in all these respects.

To the eye of the botanist, the form and colour of a flower not only indicate the latitude in which it will thrive, but are unmistakable evidence of its productive, flowering, and other characteristics. So, to the glance of the physiognomist, the mouth of any individual not only shows his capacity for food, but reveals certain important traits of moral character. A large, coarse, irregularly cleft mouth denotes that the individual is naturally inclined to be a great eater, and if not accustomed to place his appetite under the restraint of reason and judgment, he will be a glutton. Thick lips are signs that the internal alimentary coatings are correspondingly thick, which indicates strong digestion.

The physiognomical characteristics of one who is habitually thirsty, and will drink largely of some kind of liquid, is a fulness of the cheeks about half-an-inch higher than the corners of the mouth, and three-fourths of an inch outwards and backwards.

For the convenience of beginners in the study of physiognomy, I shall now, for the first time, give them the benefit of my classification of mouths.

1. The Drinking Mouth.—Everyone must have observed that the mouth is the most prominent feature in the physiognomy of all the fish species. It is very large, and is nearly straight from the centre to each outward extremity, the corners being at an angle of from twenty to thirty degrees lower than the middle or front portion, the under jaw projecting and slightly arching in the line of closure.

This mouth, in whatever form of animal-life it is found, is the physical indication of a tendency to imbibe large quantities of liquid. It bespeaks a low grade of life, and persons so formed are generally uncultured and given to strong drink, thus wasting their energies and shortening their days. This mouth also denotes a gloomy and selfish nature, grovelling as well as greedy, unrepenting and unforgiving, severe in hate and passionate in sexual love, deficient in parental affection, and careless of offspring.

2. The Gourmand Mouth is large and wide, with the corners turned up, as if they seemed ready to wind round the side of the head. This mouth has thick heavy protruding lips, and those possessed of it have dull eyes, eat and sleep well, are fond of bathing, and slow of motion. They are

loving towards their children, ever ready to assert their rights, not easily submissive to the will of others, revengeful, powerful when roused, and sometimes influential members of society. The type of character is low; such persons are naturally selfish, often gluttonous, untidy in their habits, averse to all mental as well as bodily labour, and little troubled with compunctions of conscience. This form of mouth was found in Vitellius and Crassus, in the Emperor Clodius Albinus, in Hardikanute; in Phagon, a subject of the Emperor Aurelianus; in Louis XIV., of France; in Nicholas Wood and Mallet, both Englishmen; and in the hippopotomus.

3. The Impulsive Mouth.—Long shaped, the lips meeting evenly in the centre, the upper one closing over the under at the sides with a loose expression at the corners. It indicates a noisy, social, talkative man, fond of active exercise. Good examples were found in Bill Poole, John Morrisey, in Rulof, hanged at Binghampton for murder in 1871, and in the blood-hound, stag-hound, and mastiff.

4. The Imitative Mouth.—Very wide in proportion to the width of the face; the lips shut rather evenly, though not closely together. Persons possessing this form of mouth are apt to follow the fashions, and—at least in all their physical actions—copy their neighbours. Still, they may have much originality of thought; their imitation is chiefly animal, and it will be found greater or less, according to the relative width of mouth. These are funny and polite people; talkative, jocose, and confidential in friendship; not always discreet in their communications, severe in anger, and dangerous in enmity.

5. The Secretive Mouth is recognised by the two angles at the canine teeth, giving it the appearance of forming three sides of a square. The lips are thin, and shut closely, the upper one forming slightly over the under. The centre of the mouth is high, the corners lower; the jaws are heavy, the canine teeth large and prominent. This form of mouth bespeaks destructive tendencies, with much physical courage. When you see it, expect to find a person little susceptible of mild and gentle influences, desperate when excited, incautious, and treacherous. Cat-mouthed, or secretive mouthed people enjoy the weird and grand, have little patience for high culture, trusting rather their natural powers; they prefer the din of war to the perorations of eloquence; are averse to physical labour, but may display much energy if roused by opposition. They are apt to be sluggish in the day-time, but wide awake at night, and fond of giving surprises. They are fault-finding people, somewhat selfish, disposed to trade, and musically

inclined ; naturally fond of animal food, tough and elastic in constitution, and not very careful of the young. All cats and the feline species possess this form of mouth.

6. The Saving Mouth is narrow. The two front teeth appear like wedges in the centre, jutting out, as in all the rodent animals, especially the squirrel, and giving the mouth the appearance of being contracted from side to side, with the centre pushed forward. This mouth has close-shutting lips, that appear to be tensely drawn when they are together. Observe a living squirrel, and you will understand what I mean better than by any mere description. Such a mouth indicates a disposition to secrecy, concealment, and saving. Those who exhibit this feature are not found embarking in enterprises that are either great or humane, but are full of little purposes and selfish whims. They are narrow-minded, industrious about trifles, neat, finical, ingenious, and often musical. It must be said also that they are cunning, egotistical, aspiring, fond of attention, and ironical. They have a sharp squeaking voice, and though talkative, are never orators. Their habits are strongly locative, their friends few and select, their temper joyous. With abundance of activity, yet they never occasion much stir in the world.

7. The Silent mouth.—As this form is rare, it requires particular description. It is not prominent ; rather the reverse. It sets back, and the upper lip overhangs the under one in the centre so much that it is almost the only thing to be seen, the cleft and the under lip being scarcely visible. At the sides, however, the lips scarcely close evenly, and it is only there the under lip appears to be a match in size for the upper one. These lips are compressed, but soft and flexible to the touch. The lips turn inward instead of outward. If you look down on this mouth in front all you see is the upper lip, appearing like an elongated semi-circle. Looking from the sides, the chin appears standing out, and the red part of the under lip drawn inwards. This may be called the clean, silent mouth. It is found in the giraffe, the eland and the kangaroo, three of the most silent animals in the world, being never heard to utter a loud sound.

Likewise, the leading characteristics attending this form in the human subject are silence, calculation, meditation, planning, discrimination, observation, carefulness, humility, patience, justice, integrity, gratitude, kindness. It is worthy of note, that Von Moltke has this kind of mouth, and he is said to be silent in nine languages. Doubtless he speaks less in proportion to what he knows, and to the amount of work he performs, than, perhaps, any other man in the world.

People with silent mouths are sober, earnest, and temperate ; not very social, more powerful in thought than in bodily action, or religious emotions. They act on the defensive rather than the aggressive ; attend to their own affairs without molesting their neighbours, and have a way and mind of their own, little heeding the opinions of others. They may be called worthy sort of people, humane, cool, and deliberative ; of steady cheer, industrious, and frugal, with no malignant or revengeful temper.

8. The Gregarious Mouth has large, rounding, prominent, undefined, and very thick lips, with a somewhat large and straight cleft between them. There is an utter absence of fine lines, particularly in the upper lips, which project over the under one.

This is the social mouth. It denotes parental fondness, and a friendly communicative disposition. When people with this mouth are fully roused, they become eloquent and oratorical. They are usually steady in their habits, observant, independent, dreadful in rage, and noisy in all excitement ; but kind, persuasive, and magnetically attractive when harmonious.

They must be regarded as strong characters, gregarious, good sleepers ; if in health, inclined to live well ; outspoken, and easily understood.

9. The Musical Mouth.—Its peculiarity is that whenever it opens the side portions are put on the stretch in such wise that they vibrate readily to every gush of air intended for musical notes. A wide mouth in a narrow face is unmusical, or feeble in musical power, because it does not thus stretch its lateral portions when opened. The difference between a speaking and a singing human voice is that the red part of the upper lip, or that corner with thin skin, is shown to the extreme corners, or nearly so in the singing mouth, even when it is closed ; whereas the speaking mouth does not show red on the upper lip near the corners, nor do the lips open to the extreme ends. Moreover, the line formed at the junction of the red of the upper lip, is almost straight from its outer corner to the highest central. The singing mouth has not usually such pouting or protruding lips as the talking or oratorical. The form of the singing mouth is generally full and round, on the whole, a full expression.

The mouth is seldom open to its extreme corners in speaking, but it should be in singing. Hence, the talking mouth appears more firmly closed at the sides than the singing one. The musical mouth in the human species lies horizontally, the corners not being turned either up or down. It is pre-

eminently the loving mouth. Cheerfulness and sociability dwell where it is found.

There is no time when birds or spinsters sing so much as when they have love affairs on hand—and the latter seldom sing much after marriage. Take Jenny Lind Goldschmidt as an example. Love and music are twin sisters, united by a bond as strong as that which joined the Siamese Twins; and marriage too often proves fatal to both, killing the former and leaving the latter to die for want of nourishment.

This is also the impassioned mouth; and too often an excess of animal passion is found accompanying musical genius. It is also the communicative and spendthrift mouth; persons so formed are better adapted to manage the generals than the details of business. Finally, they are sympathetic and harmonious, inclined to love pleasure and business; are fond of dress and pleased with admiration; destructive when roused, hearty eaters, and desirous to live well. This form of mouth was found in Nicolini, Porpora, Valentini, Rubini, Malibran, Cannissay, Jenny Lind Goldschmidt, Titiens, Tamberlik, Lucca, Santley, Parepa Rosa, Sims Reeves, Adelina Patti, Miss Kellog, and all great singers.

10. The Kindly Mouth.—This is the best of all animal mouths—the most even and regular in form. It has thick lips; even, flexible, mobile, and straight cleft, the outer part inclined to be open, the inner closed lightly, and never firmly compressed. When you open this mouth, and look down on the under lip, its outer edge shows the form of a horse-shoe. It accompanies dispositions that are friendly and faithful, punctual and orderly, intelligent and tractable, vegetarian in taste, free from low or criminal proclivities, too proud to stoop to a mean act, especially a small, mean one. Such persons are susceptible of a high degree of culture, are honest, kind, respectful, and self-sacrificing. As some men are by nature better than others, so are some forms of mouths—and this one indicates more noble qualities—a higher, more earnest, and regular cast of character than any others. It is of all mouths the one most free from deception—the most friendly, conciliatory, and communicative. It is seen in John Howard, the Philanthropist Father, Oberlin, Peter Cooper of New York, Mr. Goss of London, and the domestic horse.

11. The Talking or Eloquent Mouth has a pair of protusive lips, well closed towards the corners, and somewhat open in the centre, quite flexible, and rolling outwards in the middle, as if the air that has been so often driven between them had carried themselves out with it, and they had forgot to return. There is a wide difference between a talker and conversa-

tionist ; the first is one whose mouth is always open and talks without cessation ; the latter is one whose whole face lights up with reason before speaking, not easily designated by the stamp of features. Great talkers are always marked with flexible and mobile lips, and often with a wrinkle around the corner of the mouth, which is expressive of language, and persons marked in that way are generally of high temper, yet good at heart and generous in spirit, great lovers of finery and superfluity. Oratory depends on several bodily and facile conditions, among which are the following : Good heart, copious lungs and stomach, and an abundance of healthy blood, full build, high broad projecting forehead, a round head, usually a long under jaw, mouth not ill-shaped, rounded but large.

Those whose mouths are formed on the conversational plan are loquacious, companionable, inquisitive, imaginative, fond of hearing what is new or curious, inclined to travel and observe, not very secretive, lovers of children, flowers, scenery, and the beauties of Nature in general. Examples of this class of mouth were seen in Patrick Henry, Sir Robert Peel, Lord Palmerston, Lord Brougham, Kossuth, Henry Clay, John C. Calhoun, Daniel Webster, Daniel O'Connell, John B. Gough, Punshon, Beecher, Spurgeon, Gambetta, and all eloquent speakers.

12. Thinking Mouth.—Evenly and closely compressed lips, the cleft being straight and horizontal, with edges well closed and in no wise protrusive, are indicative of a thoughtful person. Fools and those who have no thoughts but what they have gathered from others, generally have mouths more or less open or gaping. The thinking mouth as now described, was conspicuous in Dr. John Hunter, John Stuart Mill, and General Grant, ex-president of the United States. Whenever you see it, rest assured you have found a person who can keep a secret. These people are quiet, they seldom speak, and when they do, it is to the purpose, and in few words. They are plain, matter-of-fact people, and kindly disposed towards the humbler classes. They are industrious thinkers, unflinching in times of danger, liberal in their views, blest with moral courage, and always living for some noble, or at least worthy, purpose.

To think we are able is almost to be so ; to determine upon attainment is frequently attainment itself. Thus earnest resolution has often seemed to have about it almost a savour of omnipotence.—
SAMUEL SMILES.

THE ORIGIN OF HUMAN NATURE.

To the Editor of THE PHRENOLOGICAL MAGAZINE.

Mr. Editor,—I see an article entitled “Origin of the Organ of Human Nature” in November’s number, 1881, upon which I would like to offer a few remarks.

I think the author of that article is not a good judge of human nature; if he was he would not have fallen into such error as he has done on such an important matter. I think such an article is enough to bring contempt upon the science of phrenology, a science that has taken away the veil from off our eyes, and laid bare the human mind to the gaze of an astonished world. The human mind is now no longer a puzzle, phrenology is the sun that exposes it to our gaze, why, therefore, should contempt be brought upon this noble science? Let us now for a little while examine this article.

The writer says, “There are two ways by which a person is enabled to judge of character. The first is founded upon observation; the second is a process which is regarded as an ‘intuition’ or an ‘instinct,’ and is carried on by a single faculty of the mind—the faculty which phrenologists have named Human Nature. . . . The first method is purely intellectual, and founded originally upon observation. . . . The second process, however, is carried on solely by Human Nature, and does not depend upon the intellectual organs.”

The first method of judging character I have no objection to because it is true. But as to the second, there is not the least shadow of warrant. I just might as well say there is an organ of Memory, as to assert there is an organ of Human Nature.

The writer not only tells us of the existence of an organ of Human Nature, but goes so far as to inform us how it came into being. He tells us it came into being through the process of evolution. What a wonderful thing is this evolution! In this age people account for almost everything on the principle of evolution, even the present *state* of the universe is the result of evolution, in fact people have evolution on the brain.

The following quotation will show how the author of this curious article accounts for existence of the organ of Human Nature. He says, “Let us take a case in illustration. A man comes to the conclusion, through repeated observation, that a firmly-closed mouth is accompanied by a character possessing self-control, perseverance, and determination. The firmly-closed mouth would be noticed by the perceptive

faculties. In the absence of the organ of Human Nature, here supposed to be absent, the man could only become aware of the above characteristics by watching them in action, by taking note of habits and incidents which exhibit self-control, perseverance, or determination. This would be affected by the perceptive faculties, and the habits, incidents, &c., would be stored up by Eventuality; after observing several cases of this kind, the firmly-closed mouth and the above-mentioned characteristics would become definitely linked together in the man's mind, and henceforth, reasoning by analogy, he would conclude that the external sign would be accompanied by the mental characteristics. This process would be carried on by the faculty of Comparison. He would probably see many illustrations of this during his lifetime, and the more he sees the more firmly it is impressed on his mind. He will naturally transmit to his children a slight tendency to regard a firmly-closed mouth as a sign of the above qualities; this tendency will only be a slight one, because it has only existed for a short time—one generation. The children would perhaps repeat the above intellectual process, and would come to the same conclusion as their father, that a firmly-closed mouth is a sign of self-control, &c., they would arrive at this conclusion more quickly than the father, it would seem more natural for them to do so, owing to the inherited tendency. They also, during their lives see a great many illustrations of this, each illustration confirms their conclusion, and they also transmit the same tendency to their children, but in a stronger degree, for it has now existed for two generations. Thus the process goes on, the tendency to associate the mental characteristics, with the external sign growing stronger and stronger as generation after generation lives and dies. It is very evident that if we only extend the process over a sufficient number of generations, the tendency will come to assume a very definite shape. The members of the second generation come to the same conclusion as their fathers, by going through the same intellectual process that he went through, being helped, however, by a very slight hereditary tendency to arrive at the same result. But later on, as the tendency becomes stronger, the need to go through an intellectual process to arrive at this conclusion has grown less and less, and in time has disappeared, and the tendency to regard a firmly-closed mouth as a sign of self-control and determination has assumed the form of an instinct. . . .

“Another illustration may be taken. It is universally recognized that a drawing back of the lips—exposing the teeth—is one of the facial indications of malignant rage, and

as Mr. Darwin says, it is most probably 'A remnant of a habit acquired during primeval times, when our semi-human progenitors fought together with their teeth, like gorillas and orangs at the present day.' Now, any animal seeing this expression on the face of another animal would recognize the signs of anger which he himself had exhibited when in a rage—or if he did not at once recognize them, he soon would from practical experience—and reasoning from analogy, either with himself or with other examples he had before seen, he would conclude that the animal who exhibited these signs was actuated by feelings of hatred. This reasoning by analogy would, as in the first example, be carried on by the faculty of comparison. This animal would transmit to his offspring a tendency to regard a drawing back of the lips as one of the indications of rage, and this tendency would gradually become strengthened and converted into an instinct just as in the first illustration.

"These two illustrations show us how the evolution of the faculty may have taken place. . . . It is to be noted that the process of reasoning by analogy, by which the expression was associated with the emotion, the sign with the cause, was carried on by the organ of Comparison, and this shows us that the organs of Human Nature and Comparison were originally one, in fact, Human Nature is a modified portion of Comparison, the two organs having been gradually separated off, and made distinct from one another. This is confirmed by the localization of the two organs, Human Nature being next to (above) Comparison. It is also confirmed by the division of the organ which is made by L. N. Fowler in his new bust."

This is the way Mr. G. accounts for the existence of the organ of Human Nature. No doubt this is very ingenious, but more ingenious than true. Mr. G. has not the shadow of evidence to support his ideas concerning the "Origin of the Organ of Human Nature." The article is only the product of his imagination.

Mr. G. tells us that the branching off of the organ of Human Nature from Comparison is confirmed by its locality to Comparison, and he also tells us, "It is confirmed by the division of the organ which is made by L. N. Fowler in his new bust." Indeed this is a very curious affirmation. How the juxtaposition of the organ of Human Nature to Comparison confirms the idea that it branched off from Comparison, and became a separate organ, is a hard thing for a simple mind to understand. And how the same idea is confirmed by the division of the organ which is made by

L. N. Fowler in his new bust is beyond human ken, unless Mr. Fowler is infallible; Mr. Fowler is a very good phrenologist, but this does not make him infallible. I might as well say, because of the juxtaposition of Conscientiousness to Firmness, it proves that Firmness branched off from Conscientiousness, or Conscientiousness from Firmness, as for Mr. G. to affirm that because of the juxtaposition of Human Nature to Comparison, it confirms the idea that the one branched off from the other.

Juxtaposition of the organs proves nothing only their relative position. If the juxtaposition of two organs prove that the one branched off from the other, then the same argument would prove that *every organ* sprang from *one*. This, however, Mr. G. denies. He says, "There are one or two other organs which may perhaps have arisen in this way, that is by separation from a preformed organ or organs. Agreeableness, which consists in an unconscious imitation of those actions which are most pleasing and acceptable to people, may have arisen from imitation. Sublimity may have arisen from the modification of adjacent parts of two organs—Ideality and Cautiousness. The great majority of the organs, however, must have arisen—through the operation of natural influences—quite independently of one another."

I say it is impossible for an organ to divide itself into two separate organs, each having a distinct function, by any natural process. If there is any natural process that performs such an operation, let Mr. G. explain to us the laws that govern the process, then we will believe him. Mr. G. might say, I have explained the laws that govern the process. To which I answer, You have given no intelligible explanation. To say that the activity of the perceptive faculties in a father, in conjunction with Comparison, would communicate a "tendency" to his offspring which would result in a new organ, is one of the greatest absurdities that it is possible for the human imagination to conceive of. "Tendency" is a wonderful power in Mr. G.'s estimation. It begets new mental organs, and consequently their functions. But what, after all, if this tendency that Mr. G. speaks of is only a phantom, a child of the imagination? (and I believe it to be nothing else in this case), then Mr. G.'s theory falls to the ground. Let us for a little while examine Mr. G.'s "tendency," to see if it could produce such an event.

If there ever was a time when man was without the organ of Human Nature, he would for ever remain without it. No new organ can be communicated to him by the law of "tendency" (if I may call it a law) or any other law.

Activity in the perceptive faculties of a father, caused in the way Mr. G. speaks of, may be the cause of activity in the *same faculties* of his offspring, which activity may result in the activity of Comparison, and no doubt would. But how this could produce a new organ I cannot understand. All the faculties of the soul are innate, natural—"born, not made." Mr. A. L. Vago, in his "Orthodox Phrenology," says, "From this principle—which admits of the mind's connection with the brain being disregarded—it is assumed that a faculty is *not created* by the conditions that favour its development. For example, light is essential to the perfect development of the eye, but the sun might shine for ever on a living body without producing an eye. It is the same with the mental faculties; by exercise, training, education, and experience they may be *developed* but not *produced*. If the principle is not within all culture from without will be ineffectual." I think any one with the least degree of intelligence can see at a glance the justness of Mr. Vago's remarks. To say that the activity of one or more mental faculties, operating in any form you like, would produce a new mental organ would be as absurd as for me to assert that the activity of my stomach, in conjunction with my heart and lungs, would produce a new bodily organ—an absurdity too gross to require refutation. It is a well known fact that the activity of any organ, or organs, causes an increased supply of arterial blood and nervous influence. The result of these is to produce size in the organ, or organs, as the case may be, but it is impossible to produce one by this process.

What knowledge we have of man in the past up to the present would prevent any reflecting person from asserting that *man* has, to-day, faculties which originally he did not possess. Human nature is the same to-day as *ever it was*, and it is the same to-day as *ever it will be*. "The Ethiopian cannot change his skin, nor the leopard his spots." The adding to, or subtraction from, Human Nature one faculty would alter human nature, and this alteration cannot be pointed to in the history of mankind. Then by what authority have we to assert that man has, to-day, a faculty more than he ever had? None whatever. Mr. G., therefore, is guilty of making this assertion without any authority. Before a man makes an assertion he ought to be able to prove that assertion. Mr. G. does not really make the assertion, but he makes it by implication, and this is equivalent. Mr. G. writes as follows: "There are one or two other organs which may, perhaps, have arisen in this way, that is, by separation from a preformed organ or organs."

This quotation plainly shows that Mr. G. believes there was a time when man was without the organ of Human Nature.

Mr. G. again says, quoting from the PHRENOLOGICAL MAGAZINE, May, 1881, p. 242: "All domestic animals read human character well, so far as it has reference to their comfort and well-being. Fear, anger, kindness, or malice, are detected in the human voice and countenance with a quickness that is astonishing, and this proves their possession of the faculty of Human Nature." Now, I presume that Mr. G. believes the above quotation. If so, then Mr. G. must believe that the lower animals have the faculty of Comparison. At all events he believes they have the faculty of Human Nature because they can detect fear, anger, kindness, and malice. Now, I am bold to say, *if* this proves they have the faculty of Human Nature, it also proves they have the faculty of Comparison. For *if* the organ of Human Nature come from Comparison, and the lower animals have the organ of Human Nature, they must have Comparison to give being to the organ of Human Nature. I do not know whether Mr. G. believes that the lower animals have the organ of Comparison, if he does I think he is an exception to all phrenologists, for they tell us that the faculty of Comparison belongs to *man alone*. For Mr. G. to be consistent with his own views concerning the origin of the organ of Human Nature, he must believe the lower animals to have the organ of Comparison, as from his views the conclusion is inevitable. I will put his ideas in the following syllogism:—

The organ of Human Nature comes from Comparison.

The lower animals have the organ of Human Nature, therefore the lower animals have the organ of Comparison. Now this conclusion is altogether unwarrantable from facts. For in that part of the brain that is allotted by phrenologists to the organs of Causality and Comparison, not a single trace of it is to be found in the brain of the lower animals, so that Mr. G. overthrows his own arguments.

Now, since Mr. G. has utterly failed to prove the existence of an organ called Human Nature, wherein, then, consists this power of discerning character. To be able to judge character well is the result of a harmonious combination of propensities and sentiments, with very large Individuality, Eventuality and Comparison, combined with great Susceptibility. When we have a harmonious combination of the propensities and sentiments, we have corresponding ideas. But if any of these faculties are deficient our ideas are deficient to a corresponding extent. And here I may state the same may be applied to the intellectual faculties. For instance, if my organ of

Colouring were very small, I could not judge of colours, in other words, I should be colour-blind ; or, if my organ of Tune is very small, I should have no idea of music, because the faculty is so weak that I cannot perceive harmony in sounds ; or, if my organ of Conscientiousness were very small, I should have no idea of right and wrong, consequently, no sense of responsibility, in fact, I should be a moral lunatic ; or, if my organ of Philoprogenitiveness were very small, I should have no love for children, and so on.

Now it is very evident, to be able to judge of a truth, we must have the faculties that would enable us to judge or perceive of that truth. If it is a truth in relation to physical science, we require the intellectual faculties to perceive of that truth.

In the perception of truth in relation to physical science, we do not always require *all* the intellectual faculties. If it is a simple idea, we require only one faculty to understand that idea. If it is a complex idea we require more than one. Or if I have to judge of a moral question, I need the moral faculties to enable me to do so, without which I could judge of no moral question. Or I may perhaps have to judge of a social question, here I require the social faculties. Therefore I conclude, to be able to judge of a truth, I must have the required faculty, or faculties, as the case may be. If a person is deficient of one or more mental faculties, he will be proportionally deficient in their corresponding ideas.

When we have very large Individuality and Comparison we are enabled to give an individuality to all our thoughts, and to classify them, then we are prepared to use them to the best advantage, then by our great susceptibility, we are rendered susceptible to the least external influence. "The smallest movement, sign, word, expression, occurrence, &c., is sufficient to indicate some characteristic emotion, idea, or cause." It is this susceptibility in combination with large organs that enables us to understand the natural language of the faculties. The natural language of Amativeness would excite the same faculty in a spectator that had the organ large ; the same may be applied to Philoprogenitiveness, Friendship, Combaticiveness, Destructiveness, Self-esteem, Approbation, Veneration, Cautiousness, and so on. But if we are deficient in any of these faculties, we are unable to judge of the natural language of the faculty or faculties we are deficient in ; their natural language will have no effect upon us, because of the weakness of these faculties. Each mental faculty has its natural language. The natural language of Self-esteem will call into activity the same faculty in the

beholder; the same may be applied to every faculty. Do not misunderstand me, for I do not mean to affirm that the natural language of the faculties is the only thing that calls into activity our faculties, because every mental faculty has its related object to call it into activity. If there was no such thing as external objects, there would be no such thing as mental activity. Mental activity, therefore, depends for its existence upon external objects: I will grant that the mind may be called into activity from internal causes after it has been called into activity from external objects, but not before. And here I might state that the degree of activity depends upon temperament, and the size of organs. There are therefore three things that call into activity our mental faculties: first, external objects; secondly, internal excitement; and thirdly, the natural language of the faculties. Now the natural language of a faculty being only a mode of action of that faculty, whatever that faculty may be, say, for instance, Self-esteem, the natural language of this faculty will call into activity the same faculty in any other animal that possesses that faculty, but in no other, and this will account for all domestic animals being able to read human character well. But they can only read human character to a certain extent, and that extent is limited to the faculties that they possess in common with man. The natural language of Veneration could have no effect upon the lower animals, because they have not got the faculty of Veneration. The same may be applied to Hope, Conscientiousness, Wonder, Ideality, and Wit, and, I might add, the reasoning faculties. The natural language of a faculty or faculties in one person will call the same into activity in another, *when the organs are large.*

If a person's moral faculties are weak, he cannot judge of anything morally; he ought not to *be heard on any* moral question whatever. Who would listen to moral lunatics on moral questions? no one that was morally sane.

Or if a person's reasoning faculties are very weak, he can no more understand the philosophy of a Locke, or a Bacon, or comprehend the principles of reasoning, than a pig could understand the principles of navigation, even if his organ of Human Nature were as large as the globe on which he stands. If this supposed organ of Human Nature were very large and the reasoning faculties very small, would this enable the person who had this combination to judge of a good reasoner? I emphatically answer *No!* not if he was to listen to two persons reasoning for a period of ten thousand years—yea, for eternity.

This supposed organ of Human Nature will never enable us to understand the function of an organ that we are deficient in, and I am sure we do not require it to understand the function of one that is large; for us to understand the function of an organ, we must have a good development of that organ. If my organ of Conscientiousness were small, I would have no sense of right and wrong, nor of responsibility, and all the reasoning in the world could not make me understand the function of the organ of Conscientiousness; and so with every other faculty. If Mr. G. and Mr. Fowler understood this, they would no longer say, there is an organ performing the function which they ascribe to Human Nature. Every faculty gives rise to an idea. I do not mean to say every faculty is an intellectual faculty, that is, they do not all *perceive* and *conceive ideas*, but the intellectual faculties manufacture ideas out of the propensities and sentiments, and if Mr. G. is deficient in any of the intellectual faculties, propensities, or sentiments he will be deficient in their corresponding ideas, and cannot judge of them in another.

The same arguments that I have brought up against Human Nature may be applied to Agreeableness.

New Zealand.

H. MCKELLAN.

A FAMILY OF CRIMINALS.—About 90 years ago, a pauper child, named Margaret, was left adrift in a village on the river Hudson, in America. The town officers fed and clothed her, but they provided no home for her, and she was housed as chance offered. In time she became the mother of a long race of criminals and paupers, which have spread like poisonous fungi in Ulster, U.S., the county of their up-bringing. The records of that county show 200 of her descendants who have been criminals—in one generation alone there were 20 children, 17 coming to maturity. Nine served terms, amounting in all to 50 years, in the State Prison for “high crimes”; the others fluctuated between gaols and almshouses. Out of 623 descendants of that castaway girl, 200 were criminals, and most of the others paupers, prostitutes, drunkards, idiots, or lunatics. The race cost the county at least 100,000 dols., irrespective of the injury they inflicted on property, and the degradation and suffering they caused others. Had the poor pauper-girl, Margaret, been in tender years educated and trained morally, as well as clothed and fed, what loss, what wretchedness, might not have been spared to the community!

IF we do not think seriously of giving sound instruction to youth, if we do not give the first place to religion, society will become a prey to the most terrible events.—EMPEROR WILLIAM.

JOHN MERRY'S COURTSHIP.

CHAPTER I.

UNDER THE SPELL.

For some months comic opera had been running in the most successful manner at the American Theatre, and the actress to whose charms, accomplishments, and exertions this was chiefly owing, was known as Miss Lillian Lawson.

The evening on which our story opens was the one fixed for her benefit, and in consequence the house was crowded from floor to ceiling with her admirers.

Among the audience, however, there was one present who had never even heard of Miss Lawson before, and who, in fact, until that evening, had never entered a theatre in his life.

John Merry was the son of an old-fashioned country gentleman, with an estate in Massachusetts; he himself, a handsome, well-built, large-hearted young fellow.

A short time previously a maiden aunt in New York had died and left John all her property; but as she would insist on making her own will, some little trouble had arisen, which necessitated the young man's presence in this city.

The performance was very good, and John Merry was enchanted. To him all the tinsel appeared gold; and when Miss Lawson came to the foot of the stage, and sang her famous song, he was completely overcome, and became quite giddy.

The performance came to a close and the curtain fell.

"Ah, very good!" remarked one young gentleman to another who was seated in the next seat to John. "S'pose we go to the stage-door, eh, and see her into her carriage?"

"Don't mind," answered the other.

John Merry determined to follow these young gentlemen in order, if possible, to obtain one more glance at the beautiful girl who had made so great an impression on him.

Passing out at the ordinary exit, they turned a corner, and in a couple of minutes John found himself standing outside a rather gloomy entrance, the only light coming from a gas-lamp, marked "Stage Door."

Two or three carriages were waiting in this side-street, and among them was one drawn by a pair of fiery-looking bay horses.

Presently this drew up in front of the door, and in a few minutes a handsomely-dressed young lady, whom John immediately recognised as his goddess of the stage, made her appearance.

She was speaking to a gentleman who accompanied her, and pausing on the door-step, slightly raised her voice as she exclaimed, "I thank you extremely, Mr. Unsworth ; but I never sup away from home."

Stepping forward, she was about to open her carriage-door ; but John sprang towards it, and turning the handle, offered his assistance.

The young lady paused for an instant with one foot on the step of the carriage, to thank him.

Suddenly the horses sprang forward, and Lillian Lawson would have fallen underneath the hind wheel had not John caught her in his arms. Staggering back with the jerk he had received, he carried the young lady as easily as though she had been a baby.

As soon as she regained her feet, Lillian exclaimed, "Oh, how can I thank you? Believe me, I am deeply grateful!"

"I am only too pleased to have had the opportunity of being of use to you," replied John, with a fervour in his voice that proved his words to be more than empty compliment.

By this time the horses had quieted down, and Miss Lawson entered the carriage in safety.

Another minute, and he was standing on the edge of the pavement with his hat in his hand, and nothing remained of the beautiful actress save the remembrance of her parting smile, which John carefully carried back with him to his hotel.

The following day, after an interview with the family lawyer, the young man was walking down Park Row, when he suddenly felt a slap on the back.

"Hallo, Jack!" exclaimed a well-known voice. "What has brought you up to town?"

Turning round, he beheld an old country friend, named Rogers, who had left the rural districts in order to work his way up at the New York bar.

John soon explained the nature of his business, and Rogers immediately proposed dinner and the theatre, to which our hero agreed.

After dinner, Rogers said, "Where shall we go?"

"I should prefer the American," replied John. "I was there last night, and should like to go again."

"What!" exclaimed Rogers, with a good-natured smile. "Has Lillian Lawson made another conquest?"

"She is a most beautiful girl," observed John, growing very red.

"She is, indeed," answered his friend. "And what is more, as good as she is beautiful. I have the pleasure of knowing her, and if you like I'll take you up and introduce you?"

"I should like it beyond all things," replied John eagerly. "When can we go?"

"Oh, she only receives on Sunday," answered Rogers. "She lives with an aunt up near Central Park, and has her little receptions on Sunday afternoon. Ah! and you meet some good people there too, my boy; not only actors, but literary men, and——"

"Then it's arranged you'll take me up on Sunday?" interrupted John. "And now let us call a cab, or we shall be late for the opening."

Miss Lawson seemed to look more lovely than ever, and John imagined that once or twice she cast a glance in his direction, and went home happy in consequence.

Sunday arrived, and, according to appointment, Rogers lunched with Merry, and then they drove together to Central Park.

A neatly-dressed servant opened the door and took their cards, and, Rogers leading the way, they entered the drawing-room.

"Good afternoon, Miss Lawson," exclaimed Rogers. "I have taken the liberty of bringing an old friend with me."

"I am deeply indebted to you, Mr. Rogers, as it gives me the opportunity that I have much desired of properly thanking this gentleman for saving my life on Friday night."

A little buzz of astonishment went round the room, and Rogers looked at his friend with surprise.

Then followed the introduction, after which Lillian continued: "I can assure you, Mr. Merry, that I have much pleasure in inscribing your name upon my list of friends."

Some other visitors now entered, and our hero retired to a seat.

John scarcely felt at home in that beautiful drawing-room, although he experienced a strange sensation of delight at being there.

But he did not know anyone present, and everything was so different to what he had been accustomed to in his father's house, that he felt strange and out of his element.

He had not long been seated alone, when an elderly lady, with careworn features, but an extremely agreeable expression, took the chair by his side.

"You must excuse me introducing myself, Mr. Merry," she exclaimed; "but I am Lillian's aunt, and wish to thank you on my own account for the service you rendered her the other evening!"

John replied that he had really done nothing to deserve gratitude, and then Miss Ward turned the conversation by

inquiring how long he had been in town, and whether he did not miss the country air and exercise.

"I must confess that I miss my morning ride," replied John.

"Are you fond of riding?" exclaimed the old lady. "My niece rides every morning in the Park, before breakfast."

"Indeed!" said John. "Then no doubt I shall have the pleasure of meeting her, for I intend to ride while I am in town."

A few minutes later, and it was time to go. As he bade farewell to Miss Lawson, she observed, "I trust, Mr. Merry, that we shall have the pleasure of seeing you again, shortly." Again that wonderful smile; and John went away, hardly knowing whether he was walking or riding, awake or asleep.

CHAPTER II.

FOR HIS SAKE.

A fortnight passed away, during which the legal business progressed slowly. Every morning our hero passed in the Park, riding by the side of the pretty actress, and every evening he occupied a place in the theatre.

It was shortly after noon, as two gentlemen were lounging over their breakfast at a well-known club. One was Paul Unsworth, and the other his parasite and factotum, Captain Brookes.

"Yes, Brookes, I've made up my mind," observed the former, after a short pause; "that girl must be mine."

"Oh! you are alluding to Lillian Lawson?"

"Of course I am," answered Unsworth, testily. "I have made propositions to her several times, but she always snubs me, or else manages to turn the conversation."

"How do you mean to proceed, then?" inquired Brookes.

"Why, I thought you might be able to suggest something," answered Unsworth.

"Well, you see, it's not easy," replied the Captain, slowly. "In these days you can't run away with a girl against her will; and, in fact, it's very awkward indeed."

"You are very little better than a fool, Brookes!" exclaimed Unsworth; "you've no more brains than a lump of wood!"

Brookes poured out some champagne and seltzer, and swallowed the insult at the same time as the liquid.

"I'll go behind the scenes at the theatre to-night," mused the other man. "She's generally one of the last to leave; and as I can't persuade her, why, I'll try and frighten her. There'll be nobody about down that passage except the doorkeeper, and a ten-dollar bill will make him deaf, dumb, and blind. What do you think of the idea?"

"It *may* succeed, Unsworth ; but I doubt it."

"Then why don't you suggest a better one?" cried Unsworth, angrily. "I think it's a splendid plan. I'll pretend to be wild with rage, and swear that unless she will promise to love me I'll kill her first and myself afterwards. Eh? what do you think of that? It ought to do."

John Merry was seated in his box, as usual, when a boy approached him.

"Mr. Merry?" said the youth.

"That's my name."

"A note for you, sir."

Only a few lines on a half-sheet of paper ; but it made John's eyes glisten and his blood course through his veins like electricity :

"MY DEAR MR. MERRY,—

"Will you come round to me as soon as the performance is over? I am afraid I shall require your assistance.

"Yours sincerely,

"LILLIAN LAWSON."

The performance over, John was about to dash in at the stage-door, when the doorkeeper stopped him.

"What do you want?" he inquired, suspiciously.

"I want to see Miss Lawson?" he replied, hesitatingly.

"You must wait, then," said the doorkeeper. "She'll be out directly."

"But I am a friend—a personal friend."

"Can't help it. I have my orders from the manager not to admit no one, and it's as much as my place is worth."

Extracting a bill from his pocket, John slipped it into the doorkeeper's hand, saying : "My good fellow, you have made a mistake. I must pass! I am here by appointment."

"Oh, beg pardon, sir," answered the man ; "didn't know that, sir. Pass in, sir."

By this time nearly all the company had left, and the stone passage leading into the theatre was deserted.

One part of it led on to the stage, and the other branched off to a staircase, which communicated with the dressing-rooms above.

John was just passing this turning when he heard Lillian's voice.

"How dare you detain me, Mr. Unsworth! Remove your hand from my arm immediately!"

"I will not!" replied her tormentor. "Do you see this knife, Lillian? I bought it to-day on purpose. Look; it is as sharp as a razor!"

"Let me go," cried Lillian, evidently in terror.

"Never, unless you promise to love me!" answered Unsworth. If you refuse to hear my prayers, Lillian, I will kill you, and settle myself afterwards!"

And as he spoke he flashed the bright shining blade of a large clasp-knife before the eyes of the frightened girl.

"Cowardly hound!" cried John, seizing his neck with one hand, while with the other he grasped his wrist. "Drop it instantly!"

And he twisted his wrist round until, with a howl of pain, the villain let the weapon fall.

Then snatching a thin cane that Unsworth carried, John proceeded to belabour the scoundrel until he roared again with pain, and begged for mercy.

Shaking him as though he had been a child, Merry then threw him away, saying, "Now begone, and remember, if you attempt to insult this lady again, I'll break your neck for you as sure as your name is what it is!"

Unsworth slunk away, and John offered Lillian his arm, and led her out to her carriage.

Then, assisting her in, he took his seat by her side, and saw her safely home, the drive being passed in silence on both sides.

John bade her good-night on the door-step, and returned to his hotel.

He thought of his father, and what he would say to his only son marrying an actress.

He thought of his soft-voiced, mild-eyed mother, with her graceful gray curls, and pictured her weeping with grief and disappointment at her dearly-beloved boy having gone so far astray.

But not an iota did his resolve change.

In the morning he would offer his hand to Lillian, take her off the stage, and, with the small fortune left him by his aunt, they would retire to some small nook where, unknowing and unknown, they might pass their lives in domestic felicity.

The morning dawned, and, earlier than usual, John was in the saddle, and riding towards the Park.

Thrice he had ridden up and down before Lillian appeared, followed, as usual, by her groom.

John's heart was too full for speech; but, as their hands met, his eyes spoke volumes.

Some minutes elapsed, and then Lillian observed, "I hardly know how to thank you, Mr. Merry, for the new service that you rendered me last night; but, believe me, I am deeply grateful and shall never forget it!"

"Why remain in a profession, Miss Lawson, that subjects you to such insult?" inquired John, in a voice trembling with suppressed emotion.

"For one reason, Mr. Merry—I love it," replied Lillian; "and, for another, it supplies me with the luxuries to which I am accustomed."

"But there is much which, to one of your sensitive disposition, must make it extremely painful. Do you never feel a desire for peace and quiet?"

"Sometimes I have that feeling," answered Lillian, with a sigh; "but I never allow myself to ponder over it. It cannot be, so why waste time in building castles in the air?"

"But why cannot it be?" persisted John. "It *can* be; and, if you will consent, it shall be. Lillian, I am only a simple countryman, and have not the graces of the men who swarm after you wherever you go, but I love you with my whole heart and soul. Be my wife, Lillian. Give up the stage, and we will go abroad, and settle down where nobody knows us, and where the past can be forgotten. Say that you love me, and will be mine!"

Slowly and sorrowfully Lillian shook her head as she replied, "It cannot be. Under different circumstances I might have given you a different answer; but as it is, Mr. Merry, I can never become your wife."

"Do not say that, Lillian!" cried John. "Have a little mercy on me! If you refuse to be mine, the light of my life will be extinguished, and I shall be left in darkness and misery for the remainder of my days!"

"I hope not; in fact, I am sure not!" gently replied Lillian. "You have known me such a short time that in a few months, or perhaps weeks, after your return home you will have ceased to think of me."

"I swear I shall not!" cried John. "I shall never forget you, Lillian! You are my first and only love; and if you will not marry me I shall break my heart! Oh, do not be so cruel! Give me a little hope!"

"I am not cruel," answered Lillian, very sadly. "Or, if I am, it is only in order to be kind. Listen to me for a few minutes, and you will see that I am in the right. In the first place, what would your father say?—the proud old gentleman whom you have described to me! You would be discarded from your family, and become an outcast from your friends."

"I should count that as nothing, Lillian," replied Merry, "compared to the loss of yourself."

"And do you not think it possible that a time might come," continued Lillian, with a slight increase of colour, "when your

pride would assert itself, and you would become ashamed of me? When, suffering from some fancied humiliation, you might even curse me for having taken advantage of your inexperience and want of knowledge of the ways of the world."

"Never, never, Lillian!" answered John.

"Never is a long day," remarked Lillian; "and the world is so small that you never know what may happen. Suppose, for instance, that, when you least expected it, some one should recognize me, and congratulate you upon having married an actress?"

John was silent, and Lillian continued: "I know you are ashamed of my profession, Mr. Merry; and although you may fancy yourself fond of me, yet you look down upon me for being an actress. Now, I am not ashamed. I am proud of it, and glory in the fact that, in spite of the falsehoods of my rivals, the insinuations of mischief-makers, and various temptations of a stage life, I can hold my head as high as any girl in the country."

And she looked so pure, so noble, and so lovely as she spoke, that Merry felt he loved her more than ever, and that no sacrifice would be too great to obtain possession of such a treasure.

"Lillian, you misjudge me," he said; "you do, indeed! I could never feel ashamed of you under any circumstances."

"You do not know yourself, Mr. Merry," answered Lillian. Take a little time for consideration, and one of these days you will thank and bless me for the manner in which I have behaved."

"You do not love me!" cried John; "I can see it now. If you had any affection for me you would not seek to raise barriers between us. Oh, cruel and hard-hearted woman!"

The tears gathered in Lillian's large eyes at this unmerited reproach, but she remained silent.

"I did not mean that," exclaimed John, when he saw the effect his words had produced. "But oh, I would have loved and cherished you so!"

Lillian, giving him her hand, said: "You will know some day that what I have done I have done for your sake! Good-bye."

"Good-bye," answered John. "Good-bye. May you be happy, Lillian!"

* * * * *

The following day Mr. Merry senior received a letter, which ran as follows:

"SIR,—

"I consider it my duty to inform you that your son, whom you, no doubt, imagine to be attending to business, is entirely neglecting the same, and is always with an actress named Lillian Lawson, who resides at No. — Sixtieth Street, near Central Park.

"Your obedient servant,

"JAMES T. BROOKES,

"Late Captain Twenty-second Regiment."

Mr. Merry happened to be suffering from a severe attack of gout, so that his temper was none of the best before the arrival of this letter, and we may be sure that its contents did not improve the state of his mind.

He used some strong language, asked his wife's advice, and told her she knew nothing about the matter when she had given it, and finally wrote two letters—one to John, and the other to the family solicitor.

When John received his father's letter he was sore and heart-broken.

He would get out of all this noise and bustle, and return to the quiet of the country, where he could wander by the side of the brook and think of *her*.

He quitted New York, and arrived home in the evening.

"Well, sir," roared his father, as he entered the library, "and what have you done with your fine actress—your Lillian Lawson—eh?"

The room seemed to whirl round and round; he felt a burning, red-hot sensation on the top of the head, his eyes closed, and John fell to the ground insensible.

"Oh," shrieked his father, "I have killed my boy! Help—help! I would rather he should marry fifty actress huzzies than that he should die!"

John was carried up to bed, and the doctor sent for.

It was about a week after that when Rogers called one Sunday afternoon upon Lillian.

"Ah, Mr. Rogers, how do you do?" she exclaimed. "What has become of your friend, Mr. Merry? I have not seen him lately."

"I am sorry to say that he is dangerously ill at home in the country," replied Rogers, fixing his eyes upon her. "In fact, a letter I have received this morning informs me that he is dying of brain fever."

"Oh, indeed!" remarked Lillian, calmly. "Poor fellow! That is very sad."

"She cannot care for him," muttered Rogers to himself, as he left, "though I thought at one time that she did."

CHAPTER III.

HOW SHE LOVED HIM.

"Mrs. Merry," exclaimed Doctor Kirk, the family medical man, "you are overdoing yourself! You are not strong enough to nurse your son night and day."

"I know I am not, doctor," replied the old lady. "But what can I do? I cannot trust these stupid servants when his precious life is at stake."

"Why not employ a trained nurse?" said Doctor Kirk. "I have one staying with me now, whom I can strongly recommend. If you do not," added the doctor, "we shall have you on the sick list next, and then it will be all over for poor John, indeed."

"Let her come over this evening," said the old lady; "for I feel quite worn out, and a few hours' rest will be worth anything to me."

"Humph!" ejaculated Mr. Merry, when his wife informed him of what she had done. "Some snuffy, fusty old woman, I suppose, who will do nothing but drink all day, and sleep all night!"

"We can but try her, my dear!" replied Mrs. Merry; "and if I can only get even one night's good rest, I shall be better."

It was just dusk when the nurse arrived, and the servant showed her up-stairs to the sick-room, where Mrs. Merry was sitting.

In the course of a quarter of an hour the old lady came down stairs, with a bright look on her face, that had been absent ever since her boy's illness.

"Well, what is she like?" inquired Mr. Merry.

"Oh, she is simply charming!" replied his wife. "Quite young, and so unassuming!"

"Then if she is young I suppose she is inexperienced?" suggested the old gentleman.

"I don't think so," answered Mrs. Merry; "and if you had seen her I am sure you would agree with me. She had no sooner entered the room, and began speaking to me, than the poor boy ceased his moaning, and directly she had arranged his pillows, and placed her hand on his forehead, he closed his eyes, and went off into a beautiful sleep; and that, you know, is what Doctor Kirk said was so important."

"Oh, well, if you are satisfied, I suppose it is all right," observed her husband.

Two or three days passed away, and the nurse seemed to have worked wonders.

"The patient is decidedly better," said the doctor ; and Mrs. Merry was delighted with the nurse's attention and devotion.

Mr. Merry said that she was the only woman who could arrange the pillow for his gouty leg so that he could rest in peace ; and when she managed to find time one evening to play him a game of cribbage—and, after a most exciting contest, he finally obtained the victory—he was completely subjugated.

It was a lovely spring day when John first returned to consciousness.

The nurse was sitting by his bedside, engaged in reading, when he awoke, and, without moving, fixed his large eyes, sunken with illness, upon her.

A look of wonder stole over his countenance, which finally merged into delight as, with difficulty, he managed to raise his arm and clasp her hand, saying, in a voice so weak that it sounded almost like a whisper, "My darling !"

"Hush ! you must not talk yet," exclaimed Lillian.

"I have seen you all the time," continued John ; "but I thought it was only a dream."

"If you go on talking," said Lillian, placing her finger across his lips, "I shall run away."

"Only once more, and I will be silent," persisted John. "Have you come to stay ? Tell me the truth."

"I shall remain until you are quite well," answered Lillian.

Never did patient make so rapid a recovery as John Merry.

"I was speaking to the doctor to-day, nurse," observed Mr. Merry, one evening : "and he assures me that we owe our boy's life entirely to you. Of course our gratitude you will always have, but I have been thinking how I could bestow a more substantial reward upon you. If there is anything you would like to have, only let me know, and you shall have it."

Lillian smiled as she replied, "Let us wait until I have finished my work, Mr. Merry, and brought the patient round to convalescence. I might ask too high a reward, you know."

"That is impossible !" exclaimed the old gentleman.

After the first recognition, John had spoken but little to Lillian. While she was in the room his eyes were always fixed upon her ; and sometimes, when she was arranging his pillows or giving him food, he would take her hand in his wasted palm, and press a kiss upon it.

But one fine sunshiny morning he clasped her hand, and said, "Lillian, I want to speak to you. I am strong enough now, and have waited very patiently."

"Go on," answered Lillian, her cheeks flushing as she spoke.

"I want to know what induced you to come down here and nurse me?"

For a few moments Lillian hesitated, blushing up to her hair: then, after a slight struggle she replied:

"When you had gone away from New York, and I no longer saw you every day, I found that I had made a mistake. Before that I had thought that I loved my profession better than I did you; but when you had left me I discovered that I loved you best. Then, when I heard that you were ill and dying, I made up my mind to come here and be near you. I went to my physician and explained the matter to him. He gave me a letter to Dr. Kirk, and—and here I am!"

"Oh! Lillian," said John, drawing her closer to him, "when I thought that I had lost you for ever, I was willing to die; I did not want to live."

Then gently disengaging herself, Lillian said, "But this must not be, John. Your father would never consent to your marrying an actress, and I will not behave treacherously toward him. To-morrow I shall return to town."

"Oh, Lillian, you cannot, you will not be so cruel!" cried John. "What was the use of restoring me to life if you are going to deprive me of all that is worth living for?"

"Don't blame me, John!" sobbed Lillian. "I do love you very, very dearly; but remember that, although I am only an actress, I have my pride, and could not marry you against your father's wish."

"But you do not know him, Lillian!" exclaimed John. "He seems hard and rough sometimes, but really is as gentle as a child, and I am certain that he would not condemn his only son to life-long misery."

"I have told you that I love you, John," observed Lillian. "But I have firmly made up my mind that without your father's permission I will never marry you. If you can obtain his consent——"

"He has it!" exclaimed a voice, and the old gentleman hobbled into the room—"on one condition, and that is, that you will consent, instead of robbing us of our son in our old age, to live here, and become our daughter."

Glad tears rained down Lillian's cheeks as Mr. Merry took her hand, and she faltered forth her consent.

"Ah, you sly puss!" remarked the old man, as he patted her on the cheek. "I see now what you were alluding to when you spoke about asking too high a reward. Never mind; you deserve him, and I hope he will soon be well enough for you to name the day."

The wedding came off in the summer, and after a trip to Europe, the happy pair settled down in the old country-house.

Lillian's life is a quiet and happy one. She does not regret her short and fleeting triumphs of the stage; and whenever her husband puts the question to her, she always replies that she is quite satisfied with her reward.

SONG.

My heart it is sad, love,
 I scarcely know why;
 Perhaps it may come from
 The grief in your eye.
 I fain all would give you
 That heaven could hold—
 Joy, blessing, contentment,
 Your heart to enfold.
 But the earth has its sadness,
 And ever 'tis nigh,
 Twin brother to gladness
 That comes with a sigh.
 Yet grieve not too sadly,
 The morrow will come,
 With laughter and sunshine,
 And see us well home.

J. W.

Answers to Correspondents.

W. P. M. (Morley).—The phrenological sketches of persons that have appeared in the MAGAZINE have only been of persons celebrated or notorious. We have in no case given delineations of correspondents who may have sent their photographs. We have no objection to do so; but we could in any case only point out the leading traits; giving to each, say, half-a-dozen lines. We cannot answer your question about handwriting.

W. J. HARRIS (Sydney).—Your letter and newspapers received with pleasure. Will write to you by next mail.

THE lady who sent the photographs of Mr. Edward Hine, author of "Forty-seven Identifications of the British Nation with the Lost Tribes," asking us to give some particulars about his character, writes, under date October 3rd:—"I am requested by friends of Mr. Hine to thank you for the delineation of his character, which they think is graphically correct. Mr. Hine himself will see it to-day, and I should think will write you in acknowledgement."

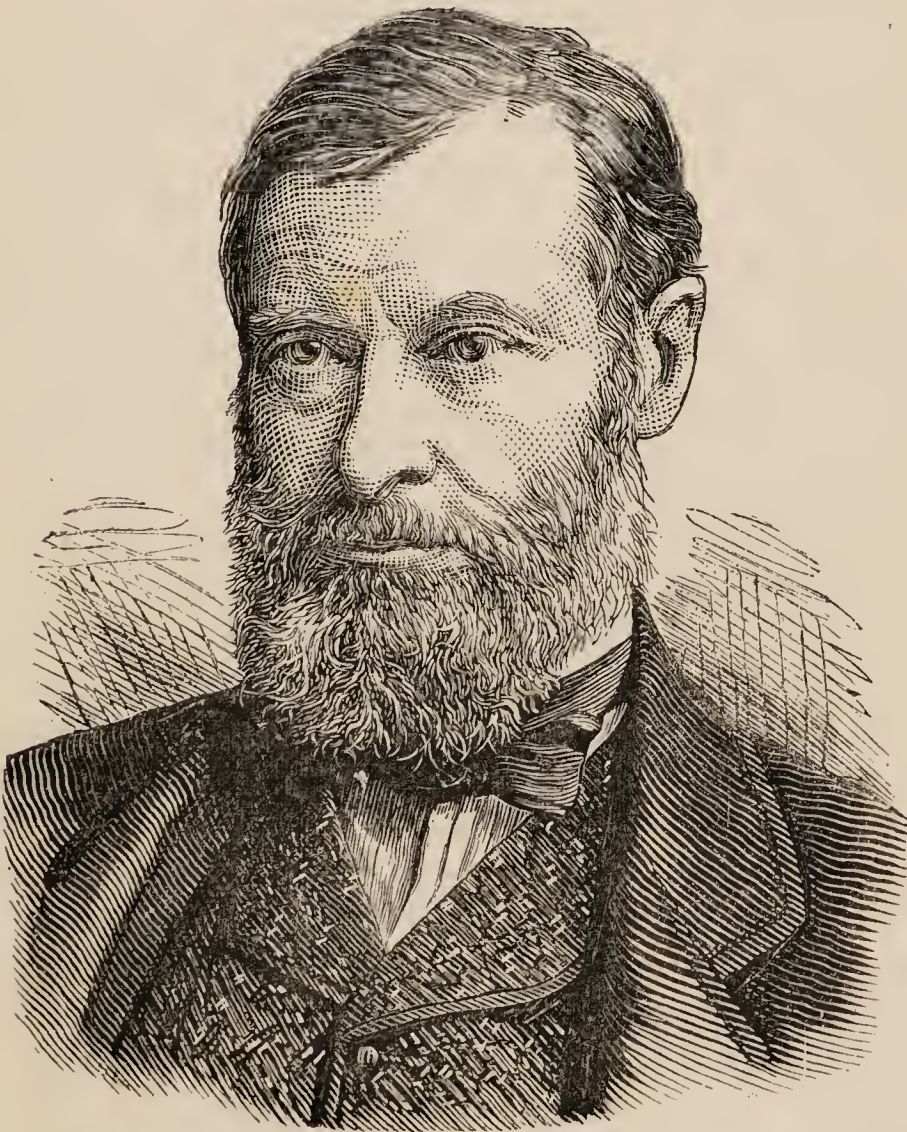
THE
Phrenological Magazine.

DECEMBER, 1882.

THE RIGHT HON. W. E. FORSTER.



HE Right Hon. W. E. Forster is characterised for several striking peculiarities of mind. In the first place, he is a man of great determination of mind. Firmness is one of his largest organs, if not the largest without exception; hence, having made up his mind



to do a thing, he is little inclined to bend or change his purpose or plans. When his courage has once been screwed to the sticking point, it is hard for even him to unscrew it. If

he were not a man of high principle, he would be liable to develop tyrannical traits of character. As it is, he is restrained by Conscientiousness, which is a large and powerfully active organ. These two organs almost form his character; for, having decided that a certain course is right, he cannot be turned from it. Nor can he, so easily as some men, adopt means for expediency's sake; he cannot be "all things to all men;" he is more of a Savonarola than of a Machiavel.

Subordinate characteristics are his energy, which gives him no rest while work is to be done; his combative spirit, which makes him rise to the height of the obstacle before him; his circumspection, which enables him to provide against possible contingencies; his economy, which gives him financial ability; his Secretiveness, which disposes him to keep his own counsel, and withholds him from giving confidences too quickly; and his Constructiveness, which, combined with his good perceptive faculties and Causality (though not a large organ), qualifies him for constructive statesmanship.

His head being high, augurs high moral tone. If there is a deficiency in any of the moral organs it is in Marvellousness (or Spirituality), which is of that moderate development that would keep him from too hasty belief in new and untried notions. The processes of his mind, indeed, are eminently scientific. Hope, Veneration, and Benevolence are fully developed organs, giving him faith in the future, some enthusiasm, reverence for things sacred, a worshipful spirit, and a disposition to work for the good of humanity. But his philanthropy arises as much from a sense of religious duty as from a tender sentiment of benevolence.

The intellect shows no special weakness. His memory of events and details may not be specially good; although his memory as a whole is strong and retentive. His intellect is essentially one that is guided by experience; it is not characterised by strong originality, and would not be likely to develop strictly new ideas; although an idea, once tried, that commends itself to his mind, he is able to apply with considerable breadth and boldness. Few men are more practical than Mr. Forster: there is but little poetry in his composition, and his imagination will never lead him far astray. He is orderly, methodical, punctual in his engagements, and disposed to have everything about him neat and in some sort of style. His Language is full, but not large; he talks well because of his well-stored mind; but would be likely to write better than speak.

His faults arise from the somewhat austere cast of his mind; from his large Firmness; from his great energy, disposing

him to push things to extremes ; from his lack of suavity of manner, which sometimes leads him to point his shafts with too much sarcasm ; from his large Conscientiousness, which will not allow him to adopt an expedient that good may come ; and from a pride of character that holds him up unbendingly where others would yield and score a victory.

His portraits do not enable one to judge well of his social brain ; but he appears to have a full development of the domestic qualities, including love of children, friends, home, and kindred.

EDUCATIONAL PRESSURE.

Among the vexed questions of the present day there are none which ask for more careful attention than this of Education, considered in its bearing upon health. Its immediate, as well as practical importance, is such, that other matters may well be postponed in order to arrive at sound conclusions here. What is the effect on the rising generation of the immense stimulus which, within the last few years, has been given to the work of Education ? There can be little room for doubt that the masses of children in our Government schools, girls especially, are in many instances suffering under the strain imposed upon them by the Examination mania, which has of late set in with such a resistless tide. But more serious still, perhaps, is the question as it relates to the education of girls in the class above the elementary. The great bulk of the children in our Government Schools pass out of them at the age of thirteen. With girls of the middle and higher classes, the educational process is frequently continued now far into the years of opening womanhood. High Schools and Colleges are springing up on every side, and University examinations are taking the place of the old-fashioned drilling, in merely mechanical accomplishments and tasks. The question is, Are girls the better or the worse for all this brain-culture ? and if there be danger, how can it be avoided, or reduced to a minimum ?

A good deal has been said and written lately on both sides of the question ; some affirming the new system to be an unmitigated evil in its relation to girls, fraught with mischief, both present and prospective ; and others pointing as triumphantly to the bright faces and healthy looks of those who have passed with impunity through a prolonged course of systematic, and even arduous, mental training. As usual there is a mixture of truth in both ways of putting things. Undoubtedly numbers of girls have been injured, and that

seriously, by the educational pressure to which they have been subjected by injudicious or over-anxious teachers. And just as certainly, multitudes more have had their whole nature braced and energized by the healthy exercise of powers which under the old *régime* were either left uncultivated or studiously repressed. The fact is, everything depends on a right understanding of what *Education* in the true sense of the term really is. Let it be clearly recognized that we mean by it, not a mere process of instruction, degenerating too often into actual "cramming," but the contemporaneous and full development of all the natural faculties, physical as well as mental, and we have at once a clue to the solution of the whole vexed problem of modern education.

Where mischief has been done we shall find, if we trace it to its source, that the education of the body has been neglected, and that of the brain stimulated to excess. A girl under such conditions is like a plant in a forcing-house, where premature development is secured at the cost of both present and future vigour. Even the mental results which are thus obtained, brilliant as they may appear, lack the element of permanence. The neglected body takes its revenge on the over-taxed brain, and both too often succumb together. The very moment of success is not unfrequently followed by a complete collapse of mental power, and instead of a healthy and happy womanhood, we have a victim of "nervousness" in one or other of its varied and distressing forms. Headache, neuralgia, hysteria, want of vital stamina and recuperative power, are in many cases distinctly traceable to over stimulus of the brain, conjoined with neglect of physical training. This is the "Rock ahead" which, in the endeavour to give our girls the advantage of a liberal education, we must beware of falling foul of.

With a true Science of Education, however, such as is beginning now more and more to be understood, there need be little fear of danger in this direction. Rather we shall find that in the hands of skilled educators the highest type of mental culture is associated with the finest physical development. At Girton, for instance, where some of the greatest intellectual triumphs have been won, the standard of health among the students is higher considerably than the average prevailing among young women of the same age and station in ordinary homes. And one of the first things which strikes a stranger in visiting some of our best conducted High Schools and Colleges for girls, is the look of health and animation to be seen on each young face. Nothing is gained by letting the brain lie fallow. On the contrary, if due care be

taken to preserve the balance between physical and mental culture, the body itself derives fresh vigour from a brain that is strengthened by hearty and wholesome exercise. And in the same way the brain, which is supplied abundantly with nourishment from a sound and vigorous body, is fit for more sustained and higher activity than one which is fed but meagrely from a feeble and half vitalized source.

“Many a girl,” says George Macdonald, “goes into a consumption from nothing but righteous discontent.” The mind was framed for exercise as much as the limbs, and if weakened by inaction, and denied the stimulus it needs, will not only suffer itself, but will very probably re-act injuriously upon its companion the body. Still there is ample room for watchfulness. And especially we may say that care is needed to avoid anything bordering upon educational pressure during the later years of a girl’s school life. From twelve to sixteen, while the constitution is still unformed and in progress of development, it is imperative that all undue strain upon the nervous centres should be avoided, and the foundation laid for a firm and vigorous womanhood. Yet this is precisely the period when in too many cases the spur is most continuously applied, and when the excitement of examinations or the pressure of severe and prolonged study make the most ruinous strain upon the system.

When womanhood is fairly reached, there is comparatively little fear of danger from vigorous and even arduous exercise of the brain. If vigour of body has been secured by wise attention to physical training during the years of girlhood, the brain will now not only be equal to hard work but will delight in it.

It is the *premature* forcing of the intellect that does harm, not the hearty and healthy exercise of powers which were meant and made for use. The true Science of Education is as yet in its infancy. With its further development—and there are many now making it their earnest study—educational pressure will become as much a thing of the past as the neglect of education altogether is at the present day. It will be seen that in reality it defeats its own end, and that if the mental powers themselves are to attain their highest development it can only be by cultivating them in accordance with the Laws of Health.

M. G.

EVERY personal consideration that we allow costs us heavenly state. We sell the throne’s angels for a short and turbulent pleasure.—R. W. EMERSON.

GEORGE COMBE.

ESTABLISHMENT OF THE EDINBURGH PHRENOLOGICAL SOCIETY.

All that Combe had hitherto done on behalf of phrenology he looked upon as mere skirmishing; he now threw himself boldly into that battle for the science which only closed with his life. Hitherto he had written anonymously; and when he had spoken on phrenology it had been as a student of the Gallian theories. He was now satisfied of the truth of those theories, and deeply impressed with the magnitude of their importance, he determined to devote the remainder of his life to their advocacy. He was now (1819) thirty-one years of age, fairly robust in health, and enjoying in a successful business the results of his early industry and economy. His brother Andrew, who had just completed his medical studies in Paris, was sharing his house in Brown Square (whither he had removed from Hermitage Place, Stockbridge, for the convenience of his brother's medical practice), and was, with George, preparing for the work of propagating phrenology. Desirous of enabling the general public to understand the real character of the new science, and especially the philosophy of it, George began to prepare his Essays for publication in complete form. He also wrote a series of lectures, which he used to rehearse at home to a few friends by way of preparation for their delivery to larger audiences by-and-by. The death of his mother this year (1819) occasioned the postponement of his public expositions, but he sent his Essays to press, submitting the proofs to Dr. Spurzheim, whose counsel he received with deep respect, although not afraid to differ from both Gall and Spurzheim if his personal observations led him to other conclusions than theirs. He followed Spurzheim (says Gibbon) more closely than Gall; and Spurzheim had so much confidence in his mastery of the subject that he left him free to explain, as might seem to him best, the differences which had arisen between the two first exponents of the system. The Essays were published towards the end of the year. How they were received may be gathered from the following:—"So great was the prejudice against the system and the book," wrote George to his brother Andrew, "that no bookseller here or in London, whom I tried, would purchase it even at prime cost; and when Bell and Bradfute, as is the custom of the trade, carried it round after publication to the booksellers, only one of them would attempt to sell it, and he took but two copies." However, a change soon occurred; the

public were not indisposed to examine the new system, and booksellers who at first refused to have anything to do with the work, found themselves obliged to apply for copies, and although the sale was slow, it was steady. The Essays had the effect of drawing public attention to the subject, and of raising the esteem in which it was held.

In February, 1820, Combe, together with his brother Andrew, the Rev. David Welsh, Mr. Brownlee, Mr. William Waddell, and Mr. Lindsey Mackersey, established the Edinburgh Phrenological Society. From this small beginning the Society rapidly grew in numbers and influence, and was able in December, 1823, to start the "Phrenological Journal."

About this time George Combe, along with his brother Abram and Mr. John Buchanan, visited New Lanark, to see Robert Owen's philanthropic experiment. Although there was much in the scheme that he admired, he foretold its failure, because it did not make proper allowance for the development of individual character, which would in the end rouse such contending interests as to destroy the community. This proved the fate of the Owenite Utopia, thus justifying the phrenologist's prescience.

The Phrenological Society prospered: in 1821 it had thirty-three paying members, besides corresponding members in London and Paris. Combe was naturally proud of the progress which phrenology was making, and with good reason. "Gall and Spurzheim," says his biographer, "had been laughed at; and the merits of phrenology would have been extinguished in the laugh if George Combe had not taken up the subject. It was his persistent advocacy of its principles and his dogged insistence upon its truth which at length, on the appearance of his "Essays," obtained for the system a patient and respectful hearing. But the opponents of phrenology were not idle. In the Glasgow Medical Society, Combe's Essays were excluded from the library, while Sir George Mackenzie's work on the same subject was admitted. Ministers preached against the principles of phrenology as leading to Materialism and Infidelity. In the general excitement on the subject which prevailed, an attempt was made to play off a hoax on Combe. Different accounts of the story have been given, but the true one is as follows:—A medical gentleman sent a cast taken from a turnip, which had been shaped into the resemblance of a head, to Combe, representing it as taken from the skull of an uncommon character, and asking him to favour the sender with his observations on the talents and disposition indicated by the head. Combe detected the trick, and got his brother Abram, who was a clever versi-

fier, to write a parody on the "Man of Thessaly;" this was pasted on the brow of the cast, which was then returned. The following are the verses :—

" There was a man in Edinburgh,
And he was wondrous wise ;
He went into a turnip field
And cast about his eyes.

And when he cast his eyes about,
He saw the turnips fine ;
' How many heads are there,' says he,
' That likeness bears to mine? '

' So very like they are, indeed,
No sage I'm sure could know,
This turnip head which I have on
From those which there do grow.'

He pulled a turnip from the ground ;
A cast from it was thrown ;
He sent it to a Spurzheimite,
And passed it for his own.

And so indeed it truly was
His own in every sense ;
For cast and joke alike were made
All at his own expense."

The perpetrator of the attempted hoax called on Combe the following day and assured him that he meant no offence, but only a jest.

Combe's collection of casts had by this time become somewhat extensive : he had them arranged in the attics at Brown Square, and there he gave his demonstrations once or twice a week. Occasionally when George was unable to give his expositions, his sister Jean, who acted as his housekeeper until his death in 1831, and who had studied the system under his directions, gave the demonstrations herself, to the satisfaction of her brother and her hearers. In spite of the incessant opposition to the science, and the ridicule cast upon it (especially after Combe's mistake in giving Haggerty, the murderer, whom he examined in prison, Conscientiousness "rather full," instead of "small," as it afterwards proved to be, and as he publicly acknowledged), phrenology was making steady progress in public estimation. The Phrenological Society had now (1821) increased to over eighty members, and Dr. Abernethy, in a pamphlet on the Science, had "declared decidedly in favour of phrenology as a system of the philosophy of man."

In the early part of this year, Combe had received from Spurzheim the manuscript of his Essay on "the Elementary

Principles of Education, founded on the Study of the Nature of Man," with a request that he would revise it for the press ; a task which Combe willingly undertook, and after its completion, induced Constable and Co. to publish the work. By the end of the year his own "Essays" had gone off so well that he was already thinking of a new edition. He had at this time four able and sympathetic coadjutors in his work : they were the Rev. David Welsh, who became the most influential defender of phrenology against the charge of materialism ; Dr. Richard Poole, editor of the *New Edinburgh Review*, Sir G. S. Mackenzie, and Dr. Combe, with whom he discussed the results of every new observation, submitted cases for their examination and criticism, and carefully weighed and compared their experience with his own. From the first he disclaimed any intention to set down everything as final. "Phrenology is not an *exact*, but an *estimative*, science," he said.

His reputation was already extending beyond his native shores. Gratifying indications of his growing fame reached him at intervals from the Continent and from America, where earnest advocates of phrenology had risen in Dr. Charles Caldwell, of Lexington, afterwards of Louisville, and in Dr. William E. Horner, of Philadelphia, who with other medical men had established the Central Phrenological Society in that city. The latter, and other office bearers of the Philadelphian Society, among them Dr. John Bell, who edited the first American edition of Combe's "Essays," with an additional chapter on the Anatomy of the brain, were elected corresponding members of the Edinburgh Society.

In 1822, Combe became so impressed with the importance of a knowledge of the anatomy of the brain, that he decided to acquire the art of dissecting the brain himself, and accordingly took lessons, and in the course of a little over a year he mastered the chief difficulties in this delicate operation. In February he announced his first course of lectures, to be delivered to the Phrenological Society (which had now acquired premises in Clyde Street, with a hall), beginning in May and ending in July. He purposed, if his attempt should prove successful, to announce a winter course, beginning in November. He was not in good health at this time, and yet he was carrying on the work of three average men. His professional duties had first to be attended to, and these had so largely increased that he was obliged to employ an additional clerk ; then he had an extensive private correspondence ; he was besides writing for the *New Edinburgh Review*, and he had to prepare his course of lectures.

His lectures, the first of which was delivered on the 14th of May, attracted an average attendance of between thirty and forty, although the charge for the course to non-members of the Society was two guineas. Dr. Combe rendered his brother valuable assistance by dissecting the brains of lower animals, and then the human brain, before the audience. The lectures had the effect of attracting "a large measure of serious attention to the subject, and of adding to the ranks of its disciples."

About this time the editors of the *London Magazine* and of the *Medical Journal* opened their pages to a defence of phrenology, and George contributed to the first-named periodical, and Dr. Combe to the second. The tone of their essays was moderate, and their effect considerable. Combe's third course of lectures began in May, 1823, and was attended by an average of twenty students. Besides being busy with the lectures, he was now engaged in arranging for publication the Transactions of the Phrenological Society, consisting of papers written by the chief members of the Society, and of some of the more important essays read during the winter session. The volume appeared in the autumn of 1823, and had a ready sale. It contained an Introduction by George Combe, giving an historical account of the origin and progress of phrenology, and thirteen other essays. He also wrote the first article, entitled "Outlines of Phrenology." Dr. Combe wrote two articles, one "On the Effect of Injuries of the Brain upon the Manifestations of the Mind;" the other entitled, "An answer to Dr. Barclay's Objections contained in his Work on Life and Organization." The other chief contributors were Dr. R. Poole, William Scott, A. Carmichael (Dublin), and Dr. G. Murray Paterson, who gave an account of the Phrenology of Hindostan, the result of the examination of about 3,000 Hindoo heads.

The success of the "Transactions" gave Combe confidence to proceed with the long meditated project of starting a quarterly journal for the advocacy and defence of phrenology. He did not, however, find many willing to second him in this bold venture; some of his associates, although friendly to phrenology, and ready to investigate its principles, hesitated to become its public advocates. Notwithstanding these weak-kneed brethren, Combe went to work, backed by a few followers as enthusiastic as himself, and in May, 1823, obtained estimates for printing the *Phrenological Journal*. In December of the same year, he had the gratification of seeing the first number published. The expense and responsibility of the undertaking were shared with him by his brother Andrew, Dr. R. Poole, Mr. William Scott, and Mr. James Simpson. Dr.

Poole edited the first four numbers, and then ceased his connection with the work. George and Andrew Combe were practically the editors of the next seventeen numbers. The latter's chief contribution to the first number was the substance of a lecture he had delivered to the Society on "Materialism and Scepticism."

The *Journal*, although serviceable to the cause of phrenology, did not create a sensation, and it never became sufficiently popular to prove a commercial success. At the best of times the sales did little beyond paying the cost of paper and printing; so that to the end its conduct was a labour of love. Mr. Scott ceased to have anything to do with it after the twenty-first number; and the three remaining proprietors continued it alone till the conclusion of the series with the fifty-third number. Mr. Robert Cox, a nephew of Combe's, was the acting editor of the *Journal* from the thirty-fourth to the fiftieth number, and contributed in all sixty articles to its pages. A second series was commenced by Mr. Hewett C. Watson, of Thames-Ditton (lately deceased), and was published at London. At the end of three years, Mr. Watson retired, the copyright was purchased by Combe, and Mr. Cox resumed the editorship, which he retained till the publication was finally discontinued in 1847.

In starting the *Journal*, Combe did not expect to gain by it commercially, and he never expressed any regret for the time and labour spent upon it. He was satisfied to think that it was doing a good work by helping to disseminate the truths of a science which he considered to be of the first importance to humanity. This thought and his enthusiasm for the cause sustained him in the up-hill struggle and the endless irritations and inconveniences involved in the carrying on of a periodical for the advocacy of unpopular ideas. The teaching of phrenology became to him more and more a duty from which he could not shrink; in it was bound up the true system of education; to the advancement of which he hoped that he might one day be able to devote his entire time. His views in regard to the applicability of the science became enlarged day by day. Writing to Dr. Welsh, he says: "I intend to write lectures showing its application to morals, criticism, and political economy; and in two years more I shall probably lecture three or four times a week for five months, and charge three guineas. If I could realize as much money as would yield me £300 a year of independent income, I would retire from business, and lecture and write on phrenology as my constant occupation, and set agoing a school on the principles mentioned. If the same success attend me in

future, I could do this seven years hence ; but somehow or other I feel it a sin to look forward for so long a period, being constantly impressed with the idea that I shall die early." His dream was realized a few years later, and in a larger measure than he had dared to hope.

In 1824, although only thirty-six years of age, Combe's hair was quite white, and this combined with his serious manner and grave expression, made him appear a much older man than he really was. "As his circumstances became easier, and his position assured," says his biographer, "the intensity of his character became softened by broader views of life and society. He had walked by strict rule, and had been almost like one who felt that he had no time to laugh. Now there was a gentler tone in his letters, and a freer expression of his affection and esteem than before ; although he never overcame a certain old-fashioned formality in addressing even his nearest relatives. This was not a change, but a development of character. His attachments had been always warm and faithful, but the expression of them had been restrained ; improved health and improved fortune gradually removed the restraint. In this, as in other respects, he broke through the trammels of his time, for the Scotch character of his generation was in exterior cold and severe in its tenderest relationships."

THE STUDY OF PHRENOLOGY MADE EASY.

CHAPTER III.

All the organs of the different faculties are constitutionally and organically adapted to the use of certain functions, and cannot be used for any other purpose, any more than the nerves for the five senses can be used for any other purpose. These organs were designed by a genius superior to man, for they are found to exist so in nature. The brain as a whole cannot possibly be adapted to any other use than that for which it was originally designed. If it is true with reference to the brain as a whole, it is equally true with reference to its parts, for the same holds true all throughout the entire organism.

Every organ of the body has its positive and relative location ; to once know their location is to always know them, and what is true in reference to the organs and functions of the body, is equally true with reference to the organs and functions of the mind ; for nature does not depart from a general rule ; in fact this principle is true throughout all nature.

Everything is made for a special use and place. If the brain is the organ of the mind, and if the mind is composed of distinct faculties, then it follows, as a matter of course, that these faculties have their organs of manifestation, else how could they be known to exist?

We start, then, upon the foundation that the brain is not only the organ of the mind as a whole, but that the mind has its special faculties to do their special work, and that they have their special locality in certain nerves of the brain designed for their particular use. The mechanical arrangement, or the chemical quality of these separate nerves, we are not prepared to discuss, but that they have these conditions and qualities is as evident as that the eye and ear have them. Besides, there must be a difference in the quality of the nervous fluid of each nerve.

The best way to become acquainted with the shape of the head and the size of the organs, is to stand behind the person to be examined and place the whole hands on the side head, and thus become familiar with its shape, whether broad or narrow, smooth or uneven. Then stand by the side, and place one hand on the frontal lobe and the other on the occipital lobe, and become familiar with the peculiarity of both portions. Then place the one hand on the top of the head to learn the general slope of that portion; at the same time measuring with the eye, and thumb, and fore-finger the proportional height, length, and width of the head from the ear. Then place the balls of the fingers on the different parts of the head, to become more familiar with the particular parts of the head; after which the judgment will begin to form as to where to begin to describe the character.

More importance should be attached to the general shape of the head, and the length of the fibre from the ear to the surface of the different parts of the brain, than to the particular developments or depressions of the head. There may be a depression in the crown of the head, the location of Self-Esteem, yet if the fibre is long from the ear to that point, Self-Esteem may be described as having influence although subordinate. A large round development indicates strength; a sharp and pointed development indicates activity.

Begin to describe the character where it appears to be the most distinctly developed, but, first of all, say all that can be said about the physiology and general health. Some organs are more easily found than others, as well as more easily described. For instance, Cautiousness (Prudence is a better name for it) is located on the corner of the head at the centre of the parietal bone, on the way from the opening of

the ear to the crown of the head. If it is large the head will be broad at that point and project at the centre of the parietal bone. The function gives prudence, restraint, guardedness, watchfulness; and when over active it gives fear, timidity, irresolution; with small Combativeness and muscular strength, the person will be cowardly; with Cautiousness, and Combativeness, and great muscular strength, there will be both courage and prudence. Combativeness with the affections will defend friends, with Acquisitiveness will defend property, with Causality and Conscientiousness will defend opinions and principles, with Benevolence will take sides with the weak and oppressed. The organ of Cautiousness, like all the organs of the body and mind, is dual, and is located on the two sides of the head.

Place the thumb of the right hand on the organ of Cautiousness and the index finger on the opposite side, both of the organs will be covered. Draw the thumb and finger directly up half an inch on each side and you will come upon an organ that should be called Consideration or Circumspection, then draw the thumb and finger half or three-quarters of an inch nearer together and you are on the organ of Conscientiousness. Draw your thumb and finger together and you are on Firmness.

“Circumspection” is not yet put forth in the books as a separate organ, but I have described character with reference to it for over twenty years, and have confidence in it as a separate organ; when large there will be consistency of character and conduct, the person will preach and practise the same thing; there will be harmony of life, one day will tally with another; the forces of body and mind will be spent uniformly; the person will not unnecessarily work so hard one day that he cannot work the next; statements will be made with reference to both sides of the question; extremes will be avoided; temperance in all things will characterise the life. Where “Circumspection” is small, the man will be carried away by the excitement of the moment, go too far, work too hard, say extravagant things without any real need, contradict himself in his words and actions, make promises without the means to fulfil them, run into debt when not necessary, in short, show a want of circumspection.

Conscientiousness being between it and Firmness gives a sense of justice, truth, and obligation, and disposes persons to reason on the right and wrong of things. Those with it large are quick to see when justice is not administered; when extra active, it is liable to make one censorious of self or others; when small and inactive, the man is not reliable, has not

much regard for truth, will resort to expediency and act upon the principle that the end will sanctify the means, will be wanting in sense of obligation, and will allow little things to let him break his word or engagement. The faculty is adapted to the fundamental principle of equity and justice.

Firmness is a central organ, and although it generally appears as one it is in both hemispheres of the brain. It holds the mind to a purpose, plan, or decision. When it is large in the back part it leads to prompt decision, when large in the fore part it gives steady perseverance and tenacity. If the animal brain predominates it makes one firm in all matters that pertain to self; with the intellect, firm in one's opinions; with the moral brain, firm in one's principles, &c.

Place the thumb and finger on the organ of Cautiousness on both sides, and draw them together towards the crown of the head, about one inch or half away, and you are on Approbativeness; then draw them together at the crown and they are on Self-Esteem, directly at the back of Firmness and next to it, while Approbativeness is directly at the back of Conscientiousness and Circumspection. Approbativeness gives a love of display (a better term than Approbativeness), a desire to make a good appearance, to please, be approved, and recognized as a favourite by friends. It is a powerful stimulus to action, and is an important element in ambition and sense of glory and renown; it leads persons to adorn themselves, to follow the fashion, to be graceful and polite, to adorn houses and grounds, to use paint and starch, to put the best where it can be seen first and keep the worst out of sight. Persons who are inferior in moral culture are more disposed to adorn the body and attract attention to external appearances. The North American Indians go no further than to paint and decorate their bodies, and some who are not Indians do the same. When small the man will not care for paint, starch, display, fashion, or external appearance; he will not stop to get praise, and will be quite unmindful of the opinions of others concerning him; he prefers nature without adornment, and looks upon fashion as all nonsense.

Between the two organs of Approbativeness in the crown of the head, back of Firmness, where the head turns from the top, Self-Esteem is located. Its function is to give a consciousness of one's own individuality and importance. Its manifestations are manliness, pride, dignity, independence, sense of liberty and personal freedom. Combined with Combaticiveness, Destructiveness, and Firmness, it disposes one to take the lead, assume responsibility and exercise authority. With large moral and intellectual faculties it enables a man to take

the lead, command respect, and secure obedience. Such men are generally found at the head of armies and great bodies of men, or acting alone where they can take all the responsibility and be masters of the situation. In excess or untrained, it leads to tyranny, arrogance, and domineering. When they have it small, men lack dignity, self-appreciation, and authority, and will take inferior places and salaries. With large Benevolence and small Acquisitiveness and Combativeness they will give themselves away for nothing. It is a very important faculty when properly trained and balanced by other faculties.

Parental Love is located in the central portion of the back brain. Put the tape around the middle of the forehead, and carry it back over the top of both ears to a central point at the back, and you are on the organ of Parental Love. In proportion as it is large will it project backward, filling up the hollow of the hand. It is more largely developed in the female head than in the male. It is an exception to the rule where the mother is not more fond of her young than the father; at least, the care of the young depends more upon the mother than the father. The function is adapted to the parental nature of men and animals, and gives love to, fondness of, and care for, the young offspring. The younger and more tender and helpless the infant is, the more care and fondness; as the infant grows into manhood the affection becomes parental pride. What parent is not proud when his or her child has grown to full maturity? When the organ is small the head will be flat and short behind.

The other organs located around it are easily found, taking this organ as their guide. Inhabitiveness is next above, Conjugalities on each side, and Amativeness in the cerebellum below. Back of and below Self-Esteem is Continuity, above and in front of it is Firmness. Back of and below Conscientiousness is Approbativeness; next to it on the outside is Cautiousness, and next to it on the inside central brain is Firmness, and in front of it is Hope.

If the head be round on the top, the highest point is Veneration. If the head could be shaped like a cone the top of it would be Veneration. Half way between the bend of the head from the top, back and front, is Veneration. Self-Esteem is on the back bend, and Human Nature on the slope to the forehead. Veneration is located on the highest point of a well-developed brain, and the farthest away from the body. The function of Veneration is to give conceptions higher than any other faculty; it elevates the tone of the mind, and aids greatly in giving altitude and perfection to the character. It gives a consciousness of a Creator, a Supreme Being, a God,

and its action leads to obedience, respect, and worship. When it predominates there is an arch to the top head or coronal brain, and water would run from it both ways. When it is small, and the other organs around are large, there will be a hollow in the same place that will hold water. When it is deficient the man or child is not sufficiently restrained in speech or action, is not so obedient or mindful of superiority, disposed to break from restraint and acknowledge no master, fond of new and progressive ideas, and liable to be ultra-radical and regardless of authority.

In all ages, from the days of Nimrod to the present time, there have not been wanting men disposed to break away from restraint and past usages, and take the lead in some innovation or rebellion, and form a new order of things. They have been the democrats of all ages. Children who speak modestly, walk gently, and look down, have Veneration large. This faculty, acting along with other faculties, has a powerful modifying influence, especially if properly trained and guided. When over active it leads to idolatry, fanaticism, superstition, formality, and servility.

Hope is located on each side of the back part of Veneration; and Spirituality, in front of Hope, is located on each side of the front portion of Veneration. Benevolence is located directly in front of Veneration, next to the turning of the head to the forehead, and when large gives a prominence in that locality, but if small the head slopes down towards the front, particularly if Veneration and Firmness are large. The function of Benevolence is to give kindness and tenderness of feeling towards the helpless and needy. When combined with other organs it stimulates to deeds of philanthropy, to reforms, and progressive movements. When it is large and active, and Conscientiousness, Self-Esteem, and the selfish brain are small, the man is more kind than just, too easy, tame, and inefficient. Such a one would not do to be a judge or leader, as he would give to and do for others too freely, and without discrimination.

L. N. F.

PROFESSOR HOLBERMAN communicates to the *Cincinnati Lancet and Clinic* the interesting fact that a mulatto recently died in the above-named city whose brain weighed 1,830 grammes. He was formerly a slave, then a soldier, and latterly had gained a humble livelihood in the Ohio State capital. Although undistinguished by any special capacity, he was of a religious and thoughtful disposition. Cuvier's brain weighed 1,930 grammes, Byron's 2,230 grammes, Cromwell's 2,238 grammes. According to Le Bon, the average weight of a full-grown man's brain is 1,322 grammes.

SKULL, BRAIN, AND MIND.

Under the above heading a series of letters have appeared in the *Sydney Daily Telegraph* for and against phrenology. We are glad to see them, because they show that phrenology is by no means dead among the Antipodeans. The discussion appears to have been opened by Dr. Simms, the physiognomist, who attempts to strike a blow at phrenology by trying to show that size of brain, other things being equal, is not a measure of mental power. Several phrenologists took up the cudgels against the doctor, Mr. Harris and Mr. Eagar (whose letters we reprint below) being among the number. It may be said that we ought to have published the letters of the doctor, to whose arguments these are a reply; but Dr. Simms is so vague in his statements, and withal so unfair, that no good purpose could be served by so doing. As an instance of his unfairness, not to say dishonesty, we may quote his reference to the size of the head of Prince Talleyrand, which he puts at 20 inches 4 lines, and then compares it with the heads of young children measuring $20\frac{1}{4}$ inches and upwards. He quotes his measurements of Talleyrand's *head* from Vol. I. of the *American Phrenological Journal*, but he quotes them inaccurately, and herein lies his dishonesty. The measurements given in the *Journal* are of the *skull*, but Dr. Simms intentionally suppresses the word "skull," and uses instead the word "head," so that he actually compares a skull, divested of hair and all integument, with the heads of living children, and then tries to make people believe that Talleyrand, the prince of diplomatists, had a head no bigger than an ordinary child. To show our Australian friends what a palpable piece of deception was here practised, we quote the account *verbatim* from the *Phrenological Journal*:—

"The cranium, denuded of the integuments, presented a beautiful conformation. The oval of the horizontal section is regular; the upper arch well shaped; the forehead large and high; the frontal sinus moderately developed; the ridges serving for the insertion of the muscles, as well as the medium line separating the hemispheres, evidently projects. The cranium was partially opened, and the hand was introduced to discover the correspondence between the internal and external surfaces of the skull. The two corresponded pretty closely. The substance of the brain was white, and of a good consistence, such as might be met with in a man of forty years of age." Then follow the measurements, the only one of which we need quote being the first: "General or hori-

zontal circumference of the *skull*, from the occipital bone to the frontal sinus, 20 inches 4 lines." It need only be added that the difference between the circumferential measurement of a head before death and the skull with the hair and other integuments off, varies from $1\frac{1}{2}$ to 2 inches ; so that Talleyrand must have had a head of from $21\frac{3}{4}$ to $22\frac{1}{4}$ inches in circumference, which is above the average size. This affords a fair sample of Dr. Simms's style of treating phrenology. We now leave Mr. Harris and Mr. Eagar to deal with the doctor's arguments.

MR. HARRIS'S REPLY.

Every student of phrenology is perfectly aware that men with the largest heads and brains are not the most "talented, powerful, or intellectual ;" the largest heads have been imbeciles, whilst the smallest heads have been complete idiots.

No work on phrenology that I am aware of, has ever recorded such a misleading statement. What they do say is this—that the greatest men have had large heads. There is a vast difference between the largest heads being the greatest men, and the greatest men having large heads. One of the largest heads we have on record is that of a hydrocephalic case, as was that of James Cardinal, who died in Guy's Hospital, London, in 1825, at 33 years of age. "His head measured 33 inches in circumference, and was found to contain five quarts of water."—Page 70, *Phrenological Journal*, August, 1881. The same journal records another case of an acephalic, or brainless child. I need hardly say that the latter was a complete idiot. One of the arguments that phrenologists bring forward in proof that the brain is the organ of mind, is that a deficiency of brain is always attended by a low degree of mental power, and that men of commanding mental capacity have invariably had heads of unusual size. Now, what is true of the brain as a whole, is true also of its individual organs. The greater the size of an organ, the greater will be its power of manifesting its faculty, and on the other hand, the smaller an organ, the weaker will be the manifestation of its faculty. In other words, the size of an organ is the measure of its power. Foederi, a zealous opponent of phrenology, is compelled to admit, when speaking of a plurality of organs in the brain, that "this kind of reasoning has been employed by the greater number of anatomists, from the time of Galen down to our own day, and even by the great Haller, who experienced a necessity for assigning a function to each department of the brain."

Cuvier says, in his "Anatomie Comparée," vol. II., "Certain

parts of the brain in all classes of animals are large or small, according to certain qualities of the animal." Bonnetus asserts that "The brain is a very complicated organ, or, rather an assemblage of different organs." But it remained for Dr. Gall to give a substantial basis to the theory that the brain is a compound organ, by discovering the respective places in it of different mental faculties. "We find," says Professor Graves, of Dublin, "that exactly in proportion as the encephalic portion of the nervous system is developed in the vertebrated animal, we can trace the appearance of new faculties, which, few and obscure in the lower species, become, as we ascend, more numerous and distinct until we arrive at man, in whom the brain attains a degree of pre-eminence sufficient to place him far above all other species of mammalia." Professor Flint, in his late work on physiology, cautiously writes:—"It may be stated as a general proposition that in the different races of men the cerebrum is developed in proportion to their intellectual power, and in different individuals of the same race the same general rule obtains."

With regard to the large heads of children, parents should not be alarmed at that alone. In a clinical lecture at St. Bartholomew's Hospital, after pointing out that a large head is normal in children, since the brain attains its full size nearly by the eighth year, Dr. Gee insists on the study of the shape rather than the actual size.—*Phrenological Journal*, February, 1878, page 43. In the lowest class of idiots the horizontal circumference of the head above the ears measures from 12 to 13 inches; in a full-sized head, 22 inches. The heads of barbarous races are smaller than those of civilized ones. In order to read human character, we must know something about the organism of man. We believe that a man's body was made for his mind, and that the best science by which we are enabled to understand him is phrenology. We must have regard to his quality as well as his quantity, hereditary tendencies and educational influences. Of the human mind we know nothing, except through the medium of the brain. "The lower brain," says L. N. Fowler, "was adapted to the physical wants of man; the frontal to the intellectual pursuits; the superior to his moral and spiritual nature." Opponents to phrenology oftentimes point out the large heads of idiots or imbeciles. Every tyro in the science of phrenology knows that the brain alone does not give an estimate of a man's talents, and we can find no teacher propounding such an erroneous notion. The other conditions must be taken into account.

Concerning the above, one of the most eminent physiolo-

gists of modern times says—"In estimating the relative development of the cerebrum in different tribes of animals, and comparing this with the relative intelligence, it must be borne in mind that the size of the organ does not, considered alone, afford a means of accurate judgment as to its power; for the quantity of the vesicular matter which it contains, affords the only fair criterion of the latter, and of this we must judge, not merely by the superficial area, but by the number and depth of the convolutions, and by the thickness of the vertical layer."

But the cerebrum varies in different classes, and orders of vertebrata, not merely in proportional size, but also in the relative development of its anterior, middle, and posterior lobes. This is a point of very great importance, in determining the value to be assigned to the organological system of Gall and Spurzheim, and their followers.

Dr. W. B. Carpenter's "Human Physiology," page 741, "Some people would have the uninitiated to believe, that because a man has a heavy brain he ought to be highly intellectual, but the weight above a certain standard has at all times been considered unhealthy."

Dr. Carpenter again speaks—"The weight of the entire encephalon in an adult male usually ranges between 40 oz. and 60 oz.; the average being about 50 oz., and in the female, from 36 oz. to 50 oz.; the average being about 45 oz. The maximum of the healthy brain seems to be 64 oz., and the minimum about 31 oz. But in cases of idiotcy, the amount is sometimes much below this, as low in weight as 20 oz. having been recorded." *Ibid.* page 736.

In recent articles, published in *The Sydney Daily Telegraph*, Dr. Simms has endeavoured to show that small brains have figured more conspicuously in history than the large ones, but so far as the doctor went in biographical history, he has failed to give us very many of the brilliant army of distinguished men and women that have played their part since the days of Cæsar to Longfellow. The doctor has dwelt chiefly upon idiots and imbeciles, rather than on the distinguished men with small heads, as if the science of phrenology were responsible for the large heads of "idiots." Phrenology is not responsible for shape, size, or any form of head whatsoever. It only points out the normal and abnormal. It also accounts and reasons scientifically of the causes and cures. To the number of causes which produce abnormal changes in the form of the skull should be added the important one of Rachitis, or, as it is commonly called, Rickets. This disease consists in a softening, general or partial, of the cranial

bones. It is of more frequent occurrence in early childhood than at any other period of life. The head of a new-born infant is sometimes found to be more or less deformed by this disease.

Dr. Simms quotes Dr. H. C. Bastian, thus ;—"It seems perfectly plain, from the facts recorded, that there is no necessary or invariable relation between the degree of intelligence of human beings and the mere size and weight of their brains," &c. But Professor Bastian has compiled much valuable data with reference to the superiority of the civilized brain in extent and structure to the savage or uncivilised.—*Phrenological Journal*, December, 1881, page 180. Dr. Simms objects to the phrenological rule—size, other conditions being equal, is the measure of power. But the doctor teaches in his lectures, as well as writing in the article, that "proportion in all the bodily parts is the secret of mental power." We ask, what is the difference between equality and proportion in all the parts?

Phrenology teaches that the size of an organ indicates its power of manifestation, other conditions being equal. By other conditions we mean temperament, quality of brain, the general organisation, the condition of the nutritive organs, the state of health, the degree of excitement under which the different faculties act, education, age, &c. In consequence of difference in these particulars, there are differences in mental manifestations. So, in proving phrenology, as well as in applying its principles, it would be absurd to give an opinion without such knowledge. Dr. Simms himself would not venture to write out a chart to a man without taking into account the physiological condition of his organism as well as the indications of character in the face, which are synonymous with the "other conditions."

For instance, suppose we select two persons, one having a large brain, the other a small brain, and the other conditions being equal, we should not hesitate in saying that the person with the large brain would manifest the greater power and ability. But it must be explained, as Dr. Simms affirms it, that a man with a small brain, and a very active temperament, may, by cultivation, rival a man with a large brain but of indolent habits and dull temperament. Facts place this proposition beyond doubt.

Dr. Macnish has well said that a large-brained person (all other conditions being equal) acquires a natural ascendancy over another whose brain is smaller. A nation of small-brained people is easily conquered and held in subjection. This fact is strikingly apparent in the facility with which the

small-headed Hindoos were subjugated, and the extreme difficulty experienced in overcoming the Caribs, whose brains are large and active. The Poles also have large brains, and they were not easily conquered. We can scarcely find a man in history with a small brain who has acquired a supremacy over masses of his fellow-men. It requires men with large brains to rule the masses. The head of Pericles, who wielded at will the fierce democracy of Athens, was of extraordinary size. The great Mirabeau, whose thunder shook the National Assembly of France, had a large brain. Danton, who rode like an evil spirit in the whirlwind of the French Revolution, had a large brain. Franklin, who guided, by the calm power of his wisdom, the legislature of America, had a large brain. The brain of Mirabeau is spoken of as enormous, and he is known to have possessed incredible force of character as well as distinguished talent. Daniel O'Connell, without great size of brain, never could have impressed so forcibly as he did during his time of agitation. There is not a single instance of any one with a small or moderate-sized brain, wielding multitudes like the Irish agitator, or grappling triumphantly with the dangers of a troubled age like Cromwell, or raising himself from a private station to the most splendid throne in Europe, like Napoleon I. To accomplish such feats, not great intellect merely is demanded, but commanding force of character, arising from unusual size of brain. (See "Phrenology made Practical and Popularly Explained," by F. Bridges, pages 14 and 15).

But size cannot be considered, irrespective of its condition, and we admit no argument against us of any avail, unless each and all of the conditions are fairly included. Size is the great desideratum, except it be large or small size resulting from malformations. We say this of the great mass of men, excepting increased size from disease, which, by the way, can never be made an argument against the principles of phrenology. In these conditions, we only express the simple laws of relation which pervade all nature, alike in physics and metaphysics, and the same in every exact or speculative science. Dr. Simms gives the weight of Agassiz's brain as about 53 oz., which is correct, but Dr. Simms proceeds thus, "so rare a case was never before or since known where a man of great intelligence had so large a brain." This kind of argument is conflicting. Dr. Lancaster says, in his "Practical Physiology," page 94: "Thus, the brains of those who have made an unusual impression on their age have been found to be large. The brain of Cuvier, the French anatomist, weighed 64 oz.; that of Dr. Abercrombie, the eminent Scotch physician, 63 oz. ;

that of Dupuytren, the great French surgeon and anatomist, 63 oz., whilst the observed weight of the brain of acknowledged idiots has been from 19 to 22 oz." Again, "the brains of Cuvier, Byron, and Spurzheim were amongst the very heaviest ever weighed."—"New Illustrated Self-Instructor in Phrenology," page 39. "Daniel Webster, America's greatest orator, statesman, and lawyer, died at 70 years, but his brain, when examined, was of such proportions that the physicians who examined it estimated it to have weighed over 60 oz. in full health and maturity."—*Phrenological Journal*, April, 1881, page 182.

"All really great men have great heads; merely smart ones, or those great only in certain faculties or specialities of character, not always. Bright, apt, smart, literary, knowing, even eloquent men, &c., often have only average, even moderately sized heads, because endowed with the very highest organic quality, yet such men are more admired than commanding, more brilliant than powerful, more acute than profound; though they may show off well in an ordinary sphere, they are not the men for great occasions, nor have they that giant force of intellect which moulds and sways the nations and ages."—"Self-Instructor," p. 39.

MR. EAGAR'S REPLY.

There have recently appeared in the columns of *The Sydney Daily Telegraph*, two articles on the "Skull, Brain, and Mind," by J. Simms, M.D., and as they are in effect an attempt to show that phrenology is a false science, I feel that unless some reply is made, it will appear to the public that Dr. Simms has proved his case, and remained master of the field. It is, perhaps, as well to say at the outset, that Dr. Simms is apparently quite ignorant, not only of the most advanced phrenological system of head measurements, but also of the fundamental laws of the science. And when he penned these articles he must have been labouring under the delusion that there was no one in the colony sufficiently acquainted with practical phrenology to expose the fallacy of his arguments, or the absurdity of his assertions. This task I shall now take upon myself, and though it is far from a difficult one, it will be necessary to write at some length.

The first part of the article in *The Sydney Daily Telegraph*, of July 15, is devoted to an account of various men possessing large heads and brains, whose mind manifestations were only of a moderate, and sometimes of an idiotic kind. In none of these cases are we furnished with the essential head measurements which are necessary to show the quantity of brain in

each section of the head, nor is any notice taken of those conditions without which no phrenologist worthy of the name, would attempt to express any opinion of an individual's mental capacity. The following quotation from Fowler's Phrenology will prove to the reader that these cases adduced by Dr. Simms, have, in the way he has presented them, no bearing upon the phrenological rule "that size is a measure of power, other things being equal." Fowler says :—"Bright, apt, smart, literary, knowing, even eloquent men, &c., often have only average, even moderate-sized heads, because endowed with the very highest organic quality ; yet, such are more admired than commanding, more brilliant than powerful, more acute than profound, though they may show off well in an ordinary sphere, yet are not the men for great occasions. Nor have they that giant force of intellect which moulds and sways nations and ages. The phrenological law is, that size, other things being equal, is a measure of power ; yet, these other conditions, such as activity, power of motive, health, physiological habits, &c., increase or diminish the mentality, even more than size. Quality is more important than quantity, but true greatness requires both cerebral quantity and quality." This extract makes it perfectly clear that the mere circumferential measurements and weights of brain, quoted by Dr. Simms, do not, unaccompanied by other phrenological conditions, in the least tell against the great phrenological rule. I would like before leaving this part of the article to explain what is meant by "quantity of brain in position." Phrenologists divide the brain into three sections, measuring horizontally from the forehead at the root of the nose, to the occipital process at the back of the head. Now in the degree that any one of the sections is wanting in proportionate size, are the mind manifestations represented by that section wanting, and it is therefore plain that a knowledge of the sizes of these sections is absolutely indispensable to the phrenologist. Suppose we take a head 22 inches in circumferential measurement, without further particulars we can say nothing—the man may be a genius or an idiot. If, however, we proceed to take the horizontal side depth of each section, we are at once in possession of most important information. I have now before me the measurements of a head 22 inches in circumference, which I shall quote :—Length of head from forehead at root of nose to occipital process, $7\frac{3}{8}$ inches ; side depth of anterior lobe of brain, measuring from forehead as before to centre of zygomatic arch, $2\frac{3}{8}$ inches ; side depth of middle section of brain, measuring from centre of zygomatic arch to mastoid process, $2\frac{3}{8}$ inches ; side depth of posterior

section measuring from mastoid process to occipital process, $7\frac{3}{8}$ inches.

It is enough for my purpose to state here that we see that the anterior lobe of the brain, which is the seat of the intellectual faculties, is the largest; and as might have been expected this head is that of an intelligent gentleman. These measurements are only a groundwork as it were, but they will serve to show the kind of measurements required by the phrenologist. Had the side depth of the anterior lobe been much less, we should have expected, other things being equal, that the individual would be of very inferior intellect—in fact, idiotic. Let it be remembered, however, that whatever the proportions borne to each other by the different sections, the circumferential measurement (22 inches) might remain the same. All the large heads and brains mentioned by Dr. Simms may now be finally dismissed; and the next astounding assertion taken into consideration.

We are told by Dr. Simms that in the lunatic asylum at Newcastle there are men and boys with full-sized and well-shaped heads, who are complete idiots, and this statement is made as telling strongly against phrenology. It is well that, as George Combe said fifty years ago, "Phrenology is the greatest teacher of charity," for it needs a strong exertion of that virtue to prevent one from speaking of Dr. Simms's assertions in a stronger manner than would suit a letter of this kind. Can Dr. Simms be ignorant that these men and boys are epileptic idiots, therefore suffering from diseased brains, and are, of course, not subjects to whom phrenological rules can be applied? Let us briefly examine the matter. A boy of ordinary intelligence, and a correspondingly well-shaped brain, is from some cause or the other, seized with epilepsy. The disease progresses, and in the course of time the boy becomes an idiot, and is removed to an asylum. Now, however the brain may be diseased, the skull, which is the only part that the phrenologist can examine, remains the same, and of course, no phrenological examination is of any use. From the first discovery of phrenology, nearly a hundred years ago, it has always been a law of the science, that phrenology does not apply to diseased subjects.

We now come to that portion of the article in which the names of several distinguished men are brought forward as telling against the phrenological law of size. I refer the reader back to the definition of that law, which I have previously given, and proceed to examine the first case—that of Talleyrand—which I trust to prove to be not only not in opposition to phrenology, but a strong proof of the truth of

the science. Dr. Simms quotes the following measurements of the head of Talleyrand :—"General horizontal measurements, 20 inches 4 lines ; from root of nose to occipital hole passing over top head, 14 inches ; from the ear hole to the other over Veneration, 11 inches 2 lines." Now, admitting that this shows that Talleyrand had a small head, let us see whether there is anything in the history of his life which would lead us to expect otherwise. Talleyrand was a great diplomatist, and a witty talker, but was he really great? Was he great in the sense that Napoleon I. was great? Napoleon, it is true, is reported to have said of him, "Talleyrand is a dexterous fellow, he has seen through me." But who was the man who shook the world? It was the man of action, the great man with the great head. Talleyrand, quick and sharp, saw through schemes, but Napoleon executed them. No phrenologist, then, would have expected Talleyrand to have a large head. Dr. Simms next compares the measurements of Talleyrand's head with those he took of the head of a Miss F. Kate Howett, of Sydney, eight years of age, and with the measurements of several other youthful individuals, and he says these measurements indicate heads larger in every way than that of the great Talleyrand! It is clear that Dr. Simms is poking fun at us, for the indispensable measurement of the size of the anterior lobe of the brain is not given in Talleyrand's case at all! Merely noticing that all the other essential conditions are also omitted, one thing strongly confirming the truth of phrenology may be gathered from the measurements. All the heads compared are two inches or more greater in the measurement taken over Veneration, than is that of Talleyrand. Dr. Simms expressly asks us to notice this, and we gladly do so. There is indicated by this measurement a great deficiency of the organs of the religious sentiment in the case of Talleyrand, and a reference to his life will show that he was so deficient. In Bellchamber's Biographical Dictionary, we find it stated—"Talleyrand renounced his bishopric, and cast away for ever the ecclesiastical character which he had so much against his own inclination been driven to assume." It is clear, therefore, that the measurements of Talleyrand's head strongly confirm the truth of phrenology.

I next pass on to Dean Swift's head, omitting to notice the reference made to the boys in the Newcastle Asylum, as they are referred to in a former part of this letter. Dr. Simms quotes from the *Lancet*—"Dean Swift's skull was a small one, and according to phrenology, Wit and Ideality were small, and his life showed these powers larger than any man of his

time." This was written in 1835, when phrenology was only understood by a few, and we may well question the accuracy of the observations of the two organs. Be it observed, however, that Swift's writings show a want of Ideality, and his deficiency in the region of this organ is exactly what might have been expected. In his biography, it is stated that Dryden is said "honestly to have told him that he would never be a poet," and a poet who showed the action of a large development of Ideality he never was. This quotation, therefore, from the *Lancet*, though not reliable from a phrenological point of view, rather confirms phrenology than otherwise. Dr. Simms next quotes the following names as those of celebrated men with small heads:—Sir Walter Scott; W. F. Bartlett, General in the American war; George Washington, Shelley, John Seldon, and Lord Byron. Of the above heads there is only one which, on the phrenological hypothesis, we should expect to be large—that of Washington. On what authority, then, are we told that it was small? Dr. Simms quotes the following from "Life and Times of George Washington:"—"His head is described by an acquaintance as small." Now any person who has not studied heads is liable to make great mistakes in estimating their sizes. Persons have said to me, "So-and-so's head is small," the fact being that the head was large. Until we receive better evidence than the above, we may fairly assume that Washington had not a small head. In good phrenological works his head is stated to have been large. I must say once for all, phrenology teaches that "really great men have great heads; merely smart ones, or those great only in specialities of character, not always." And I must also say that mere eye estimates of size by contemporaries unqualified to judge, are of no value as arguments against the truth of phrenology. In Dr. Simms's second article published in the *Sydney Daily Telegraph* of 17th July, we find a reference to the Kaffirs, and a quotation from Livingstone's "Races of the Old World," to the effect that there is "no proper race form of the cranium." On this point I may merely say that observation has convinced me that there is a race form of cranium, but that in every race a great variety of types are to be found. After this short digression, Dr. Simms returns again to his vague assertions respecting the small sizes of the heads of several distinguished men—George Bancroft, Captain Cook, Fourier, Stodard, Charles Lamb, William of Orange, and Francis Jeffrey. Without exact measurements and an observance of conditions, I need scarcely repeat that these assertions prove nothing against phrenology. Dr. Simms then returns to large heads,

which have exhibited only ordinary ability, but the absurdity of his position in this respect has already been shown, and the explanation need not be repeated. We are next treated to some of Dr. Simms's speculations regarding the functions of the brain, and we are told that it is "not an organ of thought any more than the heart, lungs, stomach, or liver," which is very astounding information indeed. It would, however, hardly prove interesting to follow Dr. Simms here, for it is with his direct attacks on phrenology that we are concerned, and mere speculative opinions cannot be considered as such. We are content to leave his theories regarding the brain to the appreciation of an enlightened posterity.

It may be noticed in passing that the diminution in the size of hats sold in England during the last 25 years may be accounted for by the different fashion of wearing them more on the crown of the head, which has in recent years prevailed, and this explanation has been considered satisfactory. In any case phrenology is not affected, for it is quite possible that civilisation may produce a change not in absolute, but in relative size, as explained in that part of his letter touching on "quantity of brain in position."

We are next told that "the secret of great mental power is a just proportion in all bodily and spiritual parts working in harmony." This is on a par with Dr. Simms's statement that a poor perception of colour is indicated by "milk-coloured eyes." There are two things that it would be interesting to know—How to estimate the proportions of the "spiritual parts," and where persons with "milk-coloured eyes" are to be found.

But as we near the end of the article a change takes place, and Dr. Simms begins to qualify. He says, "We are forced to conclude that the brain is not so important a factor in the exhibition of mind as some persons would wish to lead us to suppose," and again, "there are signs of character in the form of the skull, but they are less reliable, not so easily scanned, and there are not one-tenth as many as in the face." No indeed, with no greater knowledge of phrenology than Dr. Simms appears to possess it would indeed be difficult to scan them. But he has abandoned his ground—once admit that the shape of the brain as shown by the skull indicates any traits of character, and phrenology is proved. This, Dr. Simms, as I have shown, has done, and I might be content to leave him here, were it not for his reference to George Combe. My reverence for that high-minded philosopher will not allow me to see what he has written misinterpreted. Dr. Simms quotes the following as showing that George Combe

acknowledges that the face indicates mental changes more readily than the head :—" Sir Walter Scott's vigour, both bodily and mentally, had by that time declined, and his features had lost part of their mental expression. The bust bears evidence in the feature of this decay of power, but there is no reason to believe that the disease had at that time existed so long as to cause any diminution of the skull." Combe's simple assertion that disease had altered the expression of Sir Walter Scott's face, is twisted into praise of physiognomy at the expense of phrenology. That gifted man George Combe devoted all his energies and talents to the cause of phrenology, and a study of his works will convince anyone who enters upon such study in a spirit of honest inquiry that phrenology is truly the science of the mind. Those of us who have arrived at this conclusion from our own observations of nature are of course prepared to smile at attacks of the kind made by Dr. Simms, but among the general public such attacks, unless refuted, are likely to produce a prejudice against phrenology. If, therefore, I have vindicated the science in the eyes of the public, I shall be more than satisfied.

MODERN DEMONIACS.

Under the somewhat startling title of "Les Démoniaques d'Aujourd'hui," M. Charles Richet commences in the *Revue des Deux Mondes*, for the 15th of January, a series of papers, the first of which contains a description of phenomena which have lately been observed among the hysterical women in the Salpêtrière. At the time when mesmerism and the various allied procedures were fashionable in this country, the same phenomena were investigated *ad nauseam* among ourselves, with the result that physicians and physiologists arrived at very definite conclusions with regard not only to their nature, but also with regard to the futility of endeavouring to use them as trustworthy bases for scientific inductions. Quite recently, however, Dr. Charcot and other French physicians have begun to tread anew the well-worn and barren paths, and have brought to light, like all who have preceded them, a fresh crop of marvels for the delectation of the credulous. It is more than likely that the papers of M. Richet may serve to diffuse a taste for and an interest in these reputed marvels in circles much wider than those which they appear to concern, and it may, therefore, be worth while to devote some time to an endeavour to elucidate their character. It may be

said, *in limine*, that the best and most comprehensive popular account of such phenomena, as they have been witnessed in all ages, from the dawn of history to the present time, is to be found in the "Histoire du Merveilleux" of M. Louis Figuier, and that the best scientific account of them, and of the conditions from which they spring, is contained in Dr. Carpenter's "Mental Physiology." Figuier's description of "Les Diables de Loudun," of "Les Convulsionnaires Jansenistes," and of "Les Prophètes Protestants," should be read almost as an introduction to M. Richet's narrative of the incidents of to-day. The same ground, however, is partly covered by M. Richet's second paper, which appears in the *Revue* for the 1st inst., under the title of "Les Démoniaques d'Autrefois."

In the great Salpêtrière Hospital there are a large number of women who are the subjects of what is generically called hysteria, a malady so diversified in its symptoms that it has often been described as the Protean disorder. Perhaps the best brief account which could be given of it would be to say that it is apt to present imitations of almost every other disease, and that it is seldom incompatible with complete recovery. Hysterical girls have simulated, or their malady has simulated, disease of the spine, of the joints, of the internal viscera. They have been the subjects of all sorts of strange and *quasi*-miraculous manifestations, from the appearance of stigmata, or the seeing of miraculous visions, to the mere practice of so-called preternatural abstinence. Hysteria is always liable to be intensified by the collection together of the susceptible; and hence convents, workhouses, and infirmaries have furnished the most conspicuous theatres for its display. In addition to simulating other and ordinary diseases, the hysterical are prone to convulsive fits of a violent character, which often bear a deceptive resemblance to epilepsy; and they also constitute the great majority of the cataleptic, or sleep-walkers, and of so-called mediums and clairvoyant persons. Among these, no doubt, some are simply impostors, who make a trade of preying upon the credulity of the ignorant, and some are simply professors of legerdemain, whose tricks are the secrets of their profession. Even among the latter classes it is probable that the ready excitability of the nervous system which exists in hysteria may render a tendency towards this malady a source of success rather than of failure.

M. Richet devotes a considerable part of his first paper to a description of hysteria; but most of the facts which he recites might be equally well stated by saying that hysteria is

essentially nothing more than the effect of repressed or exaggerated emotion, as displayed in persons of a certain morbid mobility of temperament. Emotions, or feelings, as their name implies, tend to go out in action ; and such action, in primitive states of society, would generally be appropriate to the circumstances by which the emotion had been excited. Thus, terror would lead naturally to flight, and anger to attack ; and the emotion, in either case, would liberate a motive force which would be consumed in the direction indicated. In modern and complicated states of society, on the other hand, the emotions can no longer be taken as sufficient guides of conduct, and man is constantly called upon to control the actions which they prompt. This control is exercised through the medium of the will, which acquires, after due training, the power to direct emotional force into some fresh channel, and thus causes it to be consumed or exhausted harmlessly. When the will has not acquired this, the true controlling power, it may yet be able to cause emotion to be concealed or pent up ; and then the imprisoned force, neither permitted its natural outlet nor directed into a new one, is apt to be discharged irregularly through the most various channels, and generally in such a way as to weaken, or for the time altogether to dissolve, the tie by which the different centres of activity of the nervous system are united into one harmonious whole. The nervous centres may be roughly compared to a team of horses, essentially independent although yoked together, and maintained in due subordination and co-operation by the intelligence and the will. Some of the centres govern the different kinds of sensation ; others govern combined movements, such as those of respiration, which are essential to the maintenance of life ; some govern combined motions, such as those of walking and running, which are of most equal importance, and of an antiquity coeval with that of the human race itself ; and some govern combined motions, such as that of writing or of playing upon a musical instrument, which are purely artificial acquirements of the individual and recent acquirements of the race. In the natural state of things, it may be said that the coachman is on the box and that the horses are in hand. Under the influence of an emotional explosion, whether brought about by the repression of a sudden access of strong feeling or by the concealment of feelings of less intensity which have, nevertheless, been cherished and dwelt upon in secret, the coachman is liable to be thrown down, and then the horses no longer pull together, but each in its own way, or perhaps one only, while the others remain at rest. In such circumstances, the analogy being obviously of the most superficial

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character and serving only for an illustration, all the superfluous vital force—that is to say, all which is not required from moment to moment for the maintenance of respiration, or of some other function essential to the preservation of life—is liable to be directed into a single channel, or upon a single centre, either motor or sensory, which is then thrown into a state of unusual or convulsive activity. There may be morbid exaltation of some one sense, as of sight or of hearing, at the expense of unconsciousness of all impressions derived from other sources, or there may be violent and long-continued movements, either rhythmical or irregular. Many analogous states can be produced, especially in those who inherit a nervous constitution, by the mere influence of expectant attention; as when the anticipation of a hysteric paroxysm is almost sufficient to bring about its occurrence; or when persons who have been made to look fixedly at a small object in the hand lose consciousness to all impressions save those which are conveyed through the sense of hearing, and hence believe, and even feel and realize, everything which is said to them with a certain degree of emphasis and energy. If they are told that they are cold, they will begin to shiver; if they are told directly afterwards that they are hot, they will begin to strip off superfluous clothing. Phenomena of this sort, under the absurd name of “electro-biology,” were once much exhibited by itinerant showmen, but have now fallen into comparative desuetude.

In recent times, the large number of hysterical women gathered together in the Salpêtrière have been made the subjects of an amount of observation and remark, which has no doubt thrown them into states of unusual excitability, and has tended to the production of many strange forms of nervous disorder. M. Richet goes so far as to describe these forms in a very precise and definite manner; and he enumerates, as the special symptoms of more severe cases of hysteria, total or partial anæsthesia or loss of sensation, attacks of convulsions, and hallucinations or delirium. He analyzes sensation into the sense of contact, the sense of temperature, the sense of pain, and the muscular sense, by which last we are rendered conscious of the amount of force which we are exerting in any given movement or action, and are thus enabled to apportion muscular effort to the degree of resistance which we anticipate or experience. This muscular sense is generally regarded by physiologists as an independent faculty, probably exercised through special nerves; but the senses of contact, of temperature, and of pain, are probably only variations of a single common function. Still, according to

many observers, they can be separately disturbed in hysteria, in which there may be anæsthesia which is either general or local, and either partial or complete. Sometimes the loss of sensation affects one half of the body, and sometimes it is distributed in patches of irregular outline, which may call to mind the supposed "witch marks" of a few centuries ago.

It has recently been claimed as a discovery, made originally by Dr. Burq, and enlarged and verified by Dr. Charcot, that hysterical anæsthesia may be cured, or may be transferred from one side of the body to the other, by the contact of pieces of metal, such as coins. It is asserted that some patients are most speedily cured by gold, others by silver, others by zinc or copper; and the practice of applying the pieces of metal, under conditions laid down for the purpose, has received the somewhat ambitious name of "*métallothérapie*." The transference of the anæsthesia is not affected by simple metal, but only by the application of magnets, and this proceeding, it need hardly be said, is called *magnétothérapie*.

Passing on from the anæsthesia to the convulsions and the delirium, M. Richet informs us that Dr. Charcot and his pupils have shown that an attack of acute hysteria can be divided into three periods. The first of these resembles ordinary epilepsy. There is falling, loss of consciousness, lividity of the face, swelling of the neck, distortion of the features, flexion of the arms with clinching of the fists, and convulsive tremors, all of which pass suddenly into a profound sleep or stupor.

The sleep, or rather the quietude, is of uncertain and often of short duration; and it is followed, without return of consciousness, by the second period, to which Dr. Charcot has given the name of "clownism," from its being marked by extravagant contortions, which resemble those performed by acrobats in a circus. The patients take extraordinary leaps and bounds, shriek, bark, and execute all manner of strange grimaces; but the chief peculiarity of this period is the facility with which the convulsive movements may be arrested, and consciousness restored, by the simple expedient of compression of the lower part of the abdomen. The subject upon whom this compression is exercised instantly awakes, becomes quiet, and looks around with astonishment at the persons collected about her bed; having herself no knowledge of the part which she has just been performing. As soon as the pressure is suspended, consciousness is again lost and the convulsions return; and this alternation can be repeated at pleasure until this particular phase of the attack has worn itself out. So well is this known in the Salpêtrière that the

patients now exercise the necessary compression upon one another, even for several consecutive hours, so soon as any of them fall into this stage of their malady. In the third period, the convulsions cease, and consciousness is no longer entirely suspended. It is sufficiently aroused to be devoted to the contemplation of hallucinations, sometimes pleasurable, sometimes, frightful. As a rule, the hallucinations of the same patient are of the same description in every successive attack ; but phases of gaiety, of erotic excitement, of sadness, or of terror may follow one another with great rapidity. In each of them the features and the figure assume the expression and attitude of the dominant emotion, and this with a fidelity which actors might envy, and which artists might desire to contemplate. After a longer or shorter time the hallucinations cease and the tired brain gradually returns to the exercise of its normal functions.

M. Richet completes his sketch by a brief outline of what may be called the general moral character of the subjects of severe hysteria, describing their utter untruthfulness, their strange pleasure in deceiving, their shamelessness, their causeless laughter, and their uncalled-for tears. By a somewhat happy simile, he declares that it is as useless to reason with them as to try by argument to persuade a bird to cease from hopping about and to fix itself upon some single bough.

In an interesting account of some of the phenomena of what has been called lucidity, or lucid somnambulism, he shows how hysterical subjects have often been quick to catch at the smallest suggestions which might prompt them with regard to the expectations of their hearers, and also how they have never, in any single case, travelled beyond the region of their own knowledge, or belief, or superstition, when they have endeavoured to explain or to describe that which was unknown to them. In other words, they have never, in the somnambulistic or mesmerized condition, displayed any knowledge which they had not derived through the ordinary channels of waking information.

It will be evident from the foregoing that the phenomena which M. Richet describes, and which are now being exhibited at the Salpêtrière, are such as abundantly to justify the title of his paper. They are identical, in every important respect, with those which are ascribed, in the sixteenth and seventeenth centuries, to witchcraft or to demoniac possession ; and the patients, if they had lived in those days, would have been finally cured of their anæsthesia and their convulsions at the stake. The only perceptible difference is that the patients of the present time are under the influence of hallucinations

kindred to their personal experiences, while those of the past were under the influence of hallucinations derived from the superstitions of the period in which they lived, and dreamed of demons and witches rather than of railway trains or of suburban restaurants. The disease remains the same ; the delusions have varied with the causes which produce them.

It may still be doubted whether the researches of Dr. Charcot and the non-medical publicity given to these researches by such essays as those of M. Richet are calculated to be of any real advantage to the community. We fully admit that Dr. Charcot may have seen hysterical anæsthesia cured by the contact of metallic discs, or transferred to the other side of the body by the contact of magnets—that is, we fully admit that one hysterical woman, or twenty such women, may have shown no signs of sensation before the discs were applied, and may have shown abundant signs of it afterwards. What then ? The relief of the individual symptoms of hysteria is of no benefit while the hysterical tendency remains ; and it matters nothing whether a hysterical woman says that she can feel a pin-prick in a given spot or that she cannot. One thing only is certain—namely, that she will say either the one or the other, as she thinks most expedient, for the sake of rendering herself and her state objects of interest and wonder, or for the mere sake of deceiving any lovers of the marvellous by whom she may be surrounded. Much the same will hold good with regard to the abdominal compression. In order to render it successful among a given group of patients, nothing more would be required than a general understanding that it was part of the programme ; and nothing is more likely than that it would fail entirely if it were tried where this condition was not fulfilled. It is of the essence of hysteria that all its phenomena are mutable, Protean, and that sometimes one, sometimes another motor or sensory centre will gain an ascendancy over the rest of the organism, and will produce such movements or sensations as are appropriate to its separate activity. M. Richet well says that the most comprehensive cause of hysteria is to be found in feelings or reveries which are prompted by the circumstance that the real life of the subject falls short of the life of her wishes or of her dreams ; and the great object of the hysterical, in all ages, has been to attract to themselves the sympathy, or at least the notice and wonder, of others. In order to accomplish this end, they have formerly fabricated stories which were certain to lead them to the stake ; in order to accomplish it now they will be more than ready to perform any antics, to display any symptoms, or to undergo any cures,

which may render them objects of attraction to Dr. Charcot and to the students of his *clinique*. If glass and ivory had been pitched upon instead of coins and magnets, it cannot be doubted that we should have had a *vitreo-thérapie* and an *ivoire-thérapie* in the place of the present methods ; and it is worthy of recollection that, in the last century, all manner of diseases were said to be cured in this country by certain prescribed manipulations with a pair of small metal rods, which were known as "Perkins's metallic tractors." The business of these was to "draw out" diseases from the persons to whom they were applied ; and, just as M. Richet ascribes the efficacy of Dr. Charcot's coins to the feeble galvanic currents which they are said to excite, so the efficacy of the tractors was attributed to all manner of recondite relations between metals and disease. Unfortunately for these explanations, it was found that the tractors were just as efficacious when they were made of wood—so long, at least, as the patient was not aware of the substitution. The action of weak galvanic currents is now well known in medicine, and the hypothesis advanced by M. Richet makes too large a demand upon the somewhat diminished credulity of our era. From a scientific point of view the only important thing about hysteria is the evidence it affords of the facility with which the natural union and harmony of the different parts of the nervous system may be disarranged ; and the direction of the disarrangement or the precise nature of the sensory or motor function which may for a time exert a predominating influence over the thoughts and actions of this or that patient is a matter of supreme indifference. To make these accidental variations the subject of so-called scientific observation is as vain as it would be for an artist to attempt to depict the successive swirls upon the surface of a flowing river—a surface ever changing, yet always essentially the same. From a practical point of view, the best treatment of hysteria is to defeat its objects by a wholesome neglect of its manifestations ; and, when this treatment is judiciously followed, we often see the subjects of the disease, if they are not hopelessly below the normal standard of healthy nervous energy, recover with sufficient completeness to hold respectable positions and to perform the ordinary duties of their several stations. The worst treatment, the most certain to lead to depravity, imbecility, or insanity, is to make a show and a study of the patients, and to feed the love of notoriety which underlies the whole structure of their malady. It is bad enough to do this before a professional audience ; it is still worse to do it in the face of the world.

NATURE SAD.

The heath is brown, the hedgerows bare,
 No bright flower gems the sad wayside ;
 The meek sheep crop their scanty fare
 In silence on the moorland wide.

No lavrock, trembling in the sky,
 Sings to the earth its joyful song ;
 No love-note sweet, no soft reply
 Resound the bosky dells among.

Woodland or meadow, hill or vale,
 But scanty trait of beauty wears :
 Dull, drear, and sombre all—the gale
 No tone of joy or gladness bears.

The only sound that loads the air
 Is the dull ploughman's to his team,
 As bends he to th' reluctant share
 Too vacant or to muse or dream.

Toil, toil is his : from day to day
 He meets stern nature face to face—
 Is dull with her, with her is gay,
 When gaiety in his heart hath place.

He knows not, asks not, how 'tis he
 Should bear the brunt of earthly load
 While others joy, but moodily
 Plods on his hard, penurious road ;

Content the rest his sires have won
 T'await, believing there will end
 All sad'ning care beneath the sun—
 There where all earthly fortunes blend.

'Tis sad ! nay more, 'tis melancholy
 To think that here on God's green earth
 Are men whose life is slav'ry wholly,
 Unbroke by aught like careless mirth.

They till the soil, they make it yield
 Rich harvests that make glad the heart,
 But others claim the fruitful field,
 While they but own their labour's smart.

THE ORGAN OF HUMAN NATURE.

To the Editor of THE PHRENOLOGICAL MAGAZINE.

Sir,—The critic who animadverts in your last number on the article entitled “ The Origin of the Organ of Human Nature,” labours under a mistake if he thinks that I agree with the author of the article in question, for I do not. He also labours under a mistake if he thinks that I recognize the organ of Human

Nature as an offshoot from Comparison, or a part of that organ. I do not take it to be a part of Comparison. I recognize it as a faculty by itself quite different from Comparison. I located it as a distinct faculty forty years ago. I observed it first in men particularly apt in detecting the rogue they were in search of, who were able to pick him out of a crowd by his appearance, without any knowledge or description of him. My subsequent observations up to the present time confirm me in the opinion that it is a faculty by itself. It does not compare and analyze, but it penetrates and discerns by intuition. A better name for it would perhaps be "Imitation." It gives foresight and sagacity ; it sees the right time to say the right thing ; it makes the most out of a hint, and judges much from a little ; it is always searching out the motives of people ; it helps a man to understand a stranger at first sight. It makes one a student of nature—of human nature, and of the Divine nature.

Agreeableness is different from mirthfulness or imitation, as any unprejudiced, analogical, and observing mind would readily discern. But if persons conceive the idea that no one but Gall, Spurzheim, or Combe could discover an organ, they will blind their reason against any new discoveries.—

Yours, &c.,

L. N. F.

[We have received another article in reply to Mr. McKellan, but are unable to give it this month.—ED. P. M.]

Answers to Correspondents.

[We have consented, after repeated solicitation, to give each month a few delineations from photographs, as below. We can only do so, however, on the following conditions : each photograph must be accompanied by a stamped and directed envelope, for the return of the photographs ; the photograph, or photographs (for, where possible, two should be sent, one giving a front, the other a side view), must be good and recent ; and, lastly, each application must be accompanied by a remittance (in stamps) of 1s. 9d., for three months' subscription to the MAGAZINE.—ED. P. M.]

W. P. M. (Morley).—Your photograph indicates that you have a fairly substantial constitution, and that with care you will enjoy pretty good health, although subject to occasional depression, colds, &c. You will need to keep your appetite in check, and your passions. You are by nature morally inclined, and disposed to live an honest, upright life ; but it will not be all plain sailing to you. Are naturally industrious, and anxious to make money. Intellectually you are characterized for the following qualities : are thoughtful and capable of understanding complicated questions and machinery ; are ingenious and apt in using tools, adapted to mechanical work, and not suited to sedentary employment ; have some sly humour, that shows itself, however, more in acting and playing practical jokes than in saying smart things ; are weak in language, and not good in

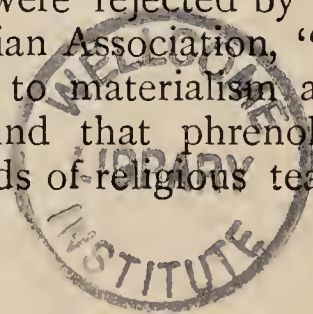
memory of names, &c. ; are fairly observant, and have an excellent memory of things seen—forms, shapes, sizes, places, and directions. You would make a good marksman, a fair landscape gardener, a good builder or cabinet-maker, or a farmer ; are not so well fitted for accountancy, for teaching, or for anything that requires a quick versatile mind. You need to cultivate order, punctuality, memory as applied to events and details, and more ease and suavity of manner.

Miss L. (Yorks).—The portrait of this lady indicates a fine, clear temperament, and a high tone of mind. She is very quick and susceptible in her mental operations : is direct, rather impulsive, and without a shadow of subterfuge or evasion ; makes friends easily, and is devoted in her friendships ; is strong in her affections, and ready to make sacrifices for those she loves, but wants attention, and is liable to be jealous if she does not get it ; not particularly vain, though fond of distinction ; possesses a high ideal of human character, and strives to attain it ; is severe on those who, knowing better, take a low, groundward flight, and drag in the mud wings that were intended to soar. She possesses linguistic ability ; is a good talker, and a fair writer ; has taste in art, and could develop considerable capacity in drawing and painting ; is sharp in her criticisms, especially of men and women, whose motives she sees through very quickly. Where she is time flies apace, for she is full of life, mirth, and merriment.

J. B. (Ireland).—The photograph you send is not a good one to judge from. Your difficulties are, too much diffidence, inability to express yourself freely, awkwardness in saying and doing things (your compliments, for instance, having a tendency to go off at the wrong end), and a lack of general memory. You need to go into company more, in order to become more easy in your manners ; to cultivate close observation and historical memory ; to note differences and distinctions more critically ; and to study men more. There is only one means of enlarging a deficient organ, and that is by exercise.

N. STENHOUSE (New Zealand).—Thanks for your letter, and the suggestions it contains. Will write you by next post.

BIGOTRY is not dead yet—at least, not in Scotland. We learn that Mr. Coates, the Glasgow phrenologist, has been visited with the terrors of excommunication—refused the communion of a church, of which his wife has been for many years a member, because he has republished a work on “Chastity,” and presumes to sell a work on human physiology and health which appears to have been put on the Scottish *Index Expurgatorius*. Clearly these Glasgow Christians think knowledge a dangerous thing, and would perpetuate ignorance. But this is not all ; Mr. Coates’s services were rejected by the committee of the Glasgow Young Men’s Christian Association, “because he is a phrenologist, and phrenology tends to materialism and non-responsibility.” These people will yet find that phrenology will prove to be the greatest power in the hands of religious teachers to check the tide of materialism.



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